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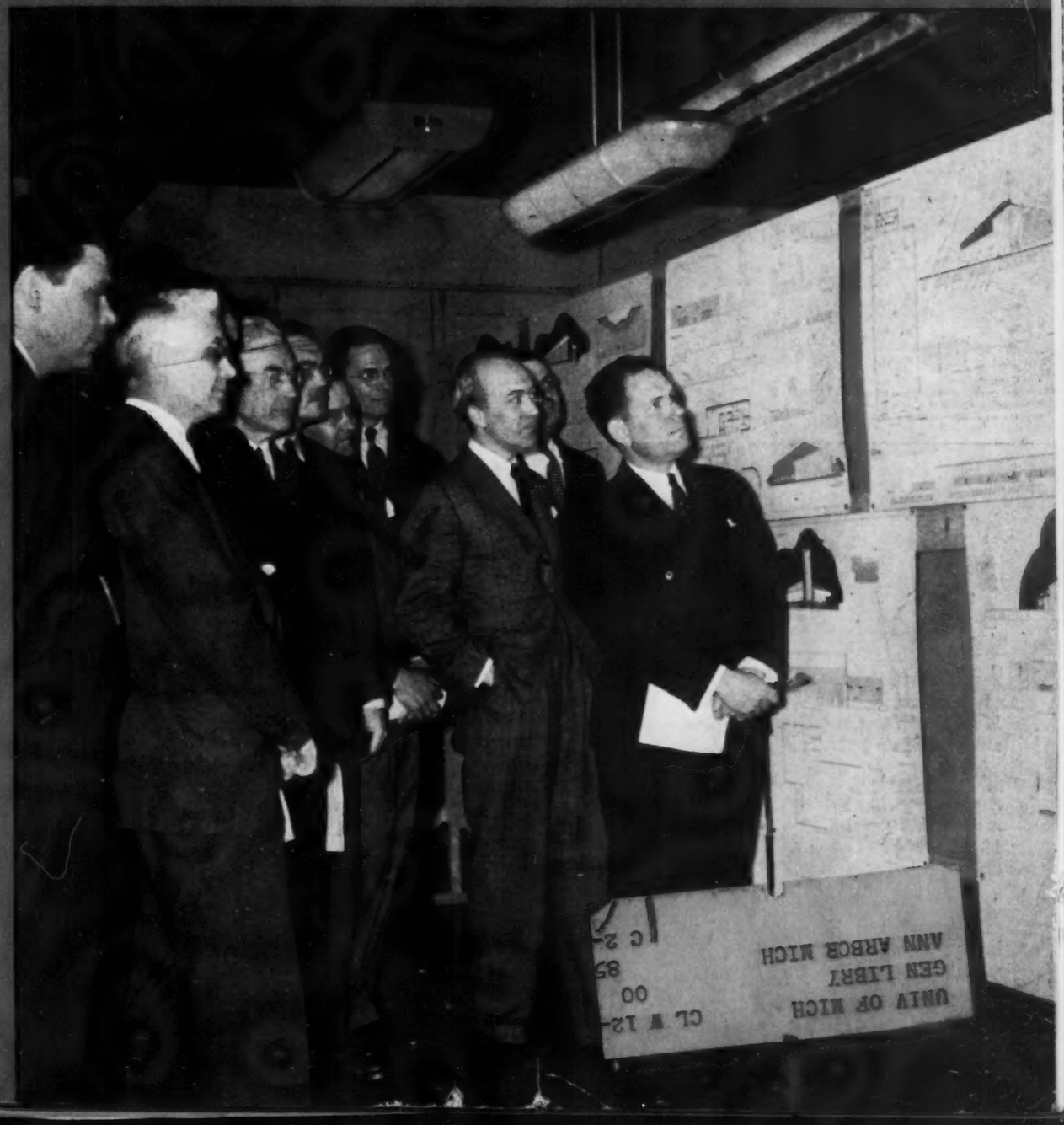
JUN 15 1942

Electrical World

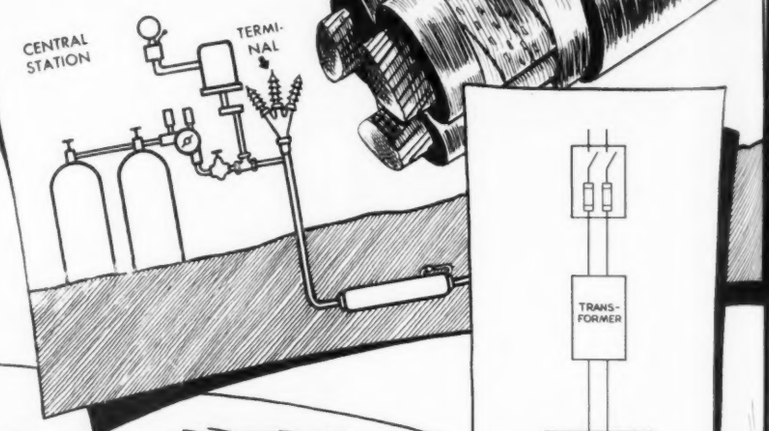
NEWS ISSUE JUNE 6, 1942

I.E.S. LIGHTING COMPETITION—Chicago lighting engineers and architects study entries in the Midwestern region contest of the National I.E.S. Lighting Competition, open to architectural students. Winners of eight regional contests will compete in the national competition

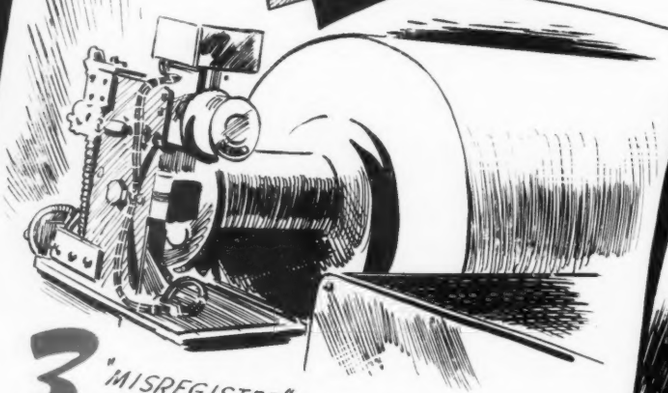


HOW DOES IT HAPPEN THAT...

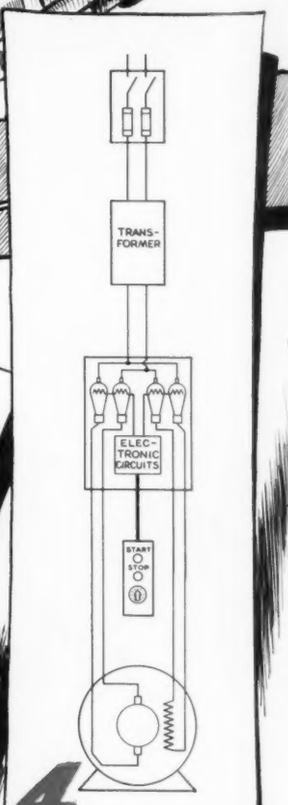
1 CABLES FOR 10 TO 40-KV SERVICE NOW CAN SIGNAL THEIR OWN WARNING OF INJURY, REPAIRS CAN BE MADE BEFORE INTERRUPTION OF SERVICE OCCURS?



2 A MIDGET LAMP, NO LARGER THAN A CIGARETTE, CAN PRODUCE FOR PRACTICAL USES A LIGHT WITH A BRILLIANCY ONE-FIFTH THAT OF THE SUN'S SURFACE?



3 "MISREGISTER" OF SEVERAL COLORS ON EACH OTHER, ON PAPER TRAVELING 1,000 FPM THROUGH A COLOR-GRAVURE PRINTING PRESS, CAN BE PREVENTED, THUS ASSURING BETTER PRINTING AND LESS WASTE?



4 "STEPLESS" SPEED CONTROL, AN ADVANTAGE OF D-C VARIABLE-SPEED MOTOR DRIVES, CAN NOW BE OBTAINED FROM AN A-C POWER SUPPLY?

General Electric and its employees are proud of the Navy award of Excellence made to its Erie Works for the manufacture of naval ordnance.

HERE'S HOW IT HAPPENS!

1 Because gas-filled cable, carrying a controlled pressure of inert nitrogen gas, was developed by General Electric. If a leak in the cable sheath occurs, the pressure drops, and this sounds an alarm.

2 Because G-E lighting engineers were able to perfect a water-cooled mercury lamp capable of producing and maintaining a highly concentrated arc approximately 12 times as brilliant as the filament in a comparable incandescent lamp.

3 Because an accurate, fast-acting photoelectric control device, engineered for the job with G-E aid, automatically holds the register to an accuracy of 0.002-3 inch.

4 Because the G-E Thy-mo-trol system, which employs electronic tubes to convert a-c to controlled d-c, provides variable armature and field voltage for operating d-c motors.

THE war has added a new dimension to product redesign. Because of scarcities, it is necessary to use materials never before applied to the product in question . . . substituting plastics for rubber, for example, or vitreous enamel in place of plating.

General Electric is in a particularly good position to make these changes successfully, because its experience with materials has been so broad. In almost every case, the alternate material being newly applied to any one G-E product is already in use as a standard material for some other G-E product. Thus, a background of practical experience is already at hand when the work of redesign begins.

Naturally, this means that you can expect higher standards of performance from the new G-E product . . . in many cases, exceeding that of the product before the alternate material was employed.

YOU INVEST IN ELECTRICAL PROGRESS WHENEVER YOU SPECIFY G-E

GENERAL ELECTRIC

DEC-6-170

Electrical World

NEWS ISSUE

Volume 117, Number 23 June 6, 1942

Utility Employees Draft Classifications

Directive to guide local boards in granting deferments sets up four grades of "critical occupations"—Employer still responsible for justifying essentiality of individual

The electric power industry was classified as "essential to the support of the war effort" for purposes of administering the Selective Service Act by Director Lewis B. Hershey this week and 86 job classifications listed as "critical occupations" in which a shortage of trained men either exists or is expected within a few months.

The finding, the ninth of its kind issued to date, means that utilities, in most instances, will be able to obtain deferment for skilled employees in the "critical occupations." It also means that, for the present, utility employees, irrespective of job, who now have a 3-A classification will be blanketed into the newly created 3-B ranking.

All Operations Covered

All phases of power-operations are covered by the directive sent to local boards for their guidance—production of energy by hydro-electric or steam generation or by diesel engine, transmission and distribution.

Listing of the "critical occupations" does not guarantee a 2-A deferment classification for all such employees, it is emphasized. General Hershey's office pointed out that the responsibility still lies with the employing company to describe fully the work being done in individual cases and to justify the essentiality of the work and shortage of skilled replacements. The responsibility also remains for training a successor as rapidly as possible, although it is recognized that most of the listed utility skills require a minimum of two years training.

In drafting the job list, Selective Service Headquarters has consulted with representatives of both public and privately owned utilities, including the Council of Electric Operating Companies, Edison Electric Institute, TVA and others, over the past month. During these discussions, job descriptions for utility occupations were prepared by the industry representatives to assist in the determination of which skills should be listed. These job descriptions are on file at the national draft headquarters for guidance in interpreting individual cases, but they are not binding.

Four Ratings

Following is a complete list of the "critical occupations" and their rating as to time required for training replacements, as incorporated in the directive, and the unofficial description for each job as used to justify its inclusion in the directive: In all cases apprentices are counted as having the job classification for which they are being trained. Number 1 designates a job requiring more than two years training, 2 between one and two years, 3 between six months and a year, 4 less than six months:

Armature winder, 2, armature winding operations in maintenance shops.

Attendants, boiler, 2, operates one or more of the following: Mechanical stokers, burners, pulverizers, and other boiler accessories.

Auxiliary operator, auxiliary equipment, 2, responsible for the operation of one or more pumps, condensers, boiler draft blowers and fans. Assists in starting and stopping main turbines and engines.

Batteryman, large emergency storage, 2, maintains storage batteries in proper state of efficiency, checks proper concentration of electrolyte. Performs periodical charging and discharging.

Blacksmith, maintenance, 1, performs general blacksmith operations in maintaining and repairing equipment.

Boiler cleaner (foreman), 4, removes fly ash or slag from high-pressure boilers and makes minor repairs.

Boilermaker, maintenance, 1, inspects, repairs and retubes boilers which operate at high temperatures and pressures.

Bricklayer, maintenance, refractory, 1, inspects and repairs brickwork of boilers which operate at high temperatures and pressures.

Cable splicer, 1, installs, repairs and maintains cables above and under ground and connects electrical apparatus. A hazardous occupation, requiring skill and experience due to working on or near high-voltage conductors.

Carpenter, maintenance, 1, installs and repairs woodwork adjacent to live and operating equipment. Does other woodwork as required.

Chemist, analytical, 1, makes chemical analysis of materials used in connection with electric power supply.

Climber (lineman), 1, see lineman.

Consultant, industrial power, 1, consultant on electrical equipment and application of electricity and general services rendered to power users.

Departmental assistant (specialized, tax, rate, right-of-way, etc.), 1, position requiring individual expertness gained by specialized education or years of training and experience, such as tax, claims, rate, traffic, real estate, etc.

Dispatcher, load, 1, has centralized control over and directs the use of electric generation and distribution equipment used in supplying electrical energy. Issues orders for putting into and taking out of service generation and distribution equipment for maintaining the necessary electrical supply, the making of necessary equipment repairs and adjustments, and the safeguarding of workmen and apparatus.

Dispatcher, service or work, 1, responsible for dispatching, routing or scheduling men and/or materials for the repair, maintenance and/or construction of supply facilities and service.

Draftsman, engineering, 1, designs, prepares and checks plans for detail draw-

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ings for construction, rebuilding and major maintenance projects.

Electrician (mechanic, station), 1, installs, inspects, repairs and connects various kinds of electrical equipment. A hazardous occupation which requires skill and experience due to working on or near high-voltage conductors.

Engineer, assistant boiler room, 1, see engineer, boiler room.

Engineer, assistant technical, 1, see engineer, technical.

Engineer, assistant turbine, 1, see engineer, turbine.

Engineer, boiler room, 1, exercises general direction of the operation and maintenance of the high-pressure boiler plant. Trains employees under his supervision.

Engineer, operating, 1, see engineer, watch.

Engineer, power service, 1, see consultant, industrial power.

Engineer, technical (professional personnel, such as electrical, mechanical, civil, chemical, hydraulic, structural, communication and other engineers), 1, engineers whose duties are of a technical nature, such as design, research, test, inspection, surveys, specifications, etc., in connection with electric power systems. To be distinguished from those who manually operate machinery, sometimes designated as "engineer."

Engineer, turbine, 1, responsible for the operation of one or more turbines or engines with their auxiliaries. Trains employees under his supervision.

Engineer, watch, 1, responsible for electric power generating station operation during his shift. Trains employees under his supervision.

Fireman, high-pressure boiler, 1, see operator, boiler.

Foreman, 1, foreman, as such, occurs in all of the operations of power industry labor. Supervises on the job. Executes managerial instructions. Directly responsible for safety and training of workmen under his jurisdiction.

Foreman, assistant, general, 1, see foreman, general.

Foreman, boiler room, 1, see engineer, boiler room.

Foreman, general, 1, see note above pertaining to foreman. General foremen have more experience and more responsibility and supervise "foreman."

Foreman, yard, 1, see yardmaster.

Inspector, 1, man especially qualified by training and experience to inspect power plants, lines, substations, equipment and materials to insure that construction and safety standards have been complied with and operating conditions are satisfactory.

Lead burner, 1, a skilled occupation, making fixed joints in the lead conductors of standby and control storage batteries and the repair of lead storage battery tanks.

Lineman or serviceman, lineman, 1, erects and climbs poles and towers, strings wires and installs apparatus in construction, repair and maintenance work in the supply and maintenance of service to customers. As required, inspects and tests insulators and other equipment. A hazardous occupation which requires skill and experience due to working on or near high-voltage conductors.

Local representative, operating, 1, represents the company in a small or isolated community, maintains and repairs electric power distribution system. Assists repair crews that are sent in for major jobs. Under normal conditions he is the sole representative of the company and upon him rests the responsibility of maintaining the property in condition to furnish dependable service.

Machinist, maintenance, 1, inspects, repairs mechanical equipment adjacent to live and operating equipment. Also does machine work in maintenance shops.

Mechanic, maintenance, 1, inspects and performs mechanical operations for repair and maintenance of equipment adjacent to live and/or operating equipment or in the shop.

Mechanic, specialized equipment, 2, repairs, overhauls and maintains special equipment, such as winch-equipped line trucks, tractors, ditching machines, etc.

Mechanic, station (electrician), 1, see electrician.

Meterman, high-voltage, 1, installs, inspects, repairs and tests high-voltage electric meters and meter transformers.

Officers, general, 1, responsible for administration and management of entire company or major divisions thereof.

Oiler, operator, 2, see auxiliary operator.

Operator, assistant, switch control, 1, see operator, switch control.

Operator, boiler, 1, responsible for operation of one or more high-pressure boilers.

Operator, coal tower, 2, operates and maintains equipment used in handling coal or other materials.

Operator, condenser, 2, see auxiliary operator.

Operator, electric crane, 3, operates traveling cranes for lifting turbine cases and other heavy apparatus and materials.

Operator, engine, 1, see engineer, turbine.

Operator, heavy mobile equipment, 3, responsible for operation of tractors, heavy trucks, ditching machines, hole diggers, pole-raising devices, winches and similar heavy mobile equipment.

Operator, locomotive crane, 3, see operator, coal tower.

Operator, mill, 2, see attendants, boiler.

Operator, oil purification, 2, tests, cleans and reconditions insulating oil used in connection with electric power transformers, circuit breakers and other equipment. Makes high-voltage tests of oil samples. Works in close proximity to high-voltage equipment. This work is necessary to avoid interruption to electric power service and prevent damage to critical electric power equipment. Trains others for similar work.

Operator, pumps, 2, see auxiliary operator.

Operator, radio, 2, radio operator with "commercial" license.

Operator, ship unloading hoists, 1, operates and maintains equipment used in handling coal or other materials from ships and barges.

Operator, stoker, 2, see attendants, boiler.

Operator, substation, 1, operates all electrical and mechanical equipment located in one or more of his stations. Dispatches the handling of power lines and equipment in and adjacent to his station as assigned.

Operator, switchboard, 1, see operator, switch control.

Operator, switch control, 1, responsible for the operation of high-voltage switching apparatus, synchronizing, connecting or disconnecting generators. Trains employees under his supervision.

Operator, system, 1, see dispatcher, load.

Operator, turbine, 1, see engineer, turbine.

Patrolman, climbing, 1, see lineman.

Patrolman, transmission line, 4, makes periodic inspections and examinations of transmission lines and substations to locate defects to avoid interruptions of service.

Pipe fitter, maintenance, 1, see steam fitter.

Repairman, electric, power plant or substation, 1, see electrician.

Rigger, 1, a rigger engaged in construction operations and erection, demolition and moving of heavy equipment.

Rigger, underground cable, 2, a rigger employed in making the set-up and supervising operations for pulling underground cables.

Sheet metal worker, maintenance, 1, a sheet metal worker employed in maintenance of machinery parts and equipment.

Steam fitter, maintenance, 1, inspects, repairs and maintains high-pressure steam piping, valves and fittings adjacent to live and operating equipment.

Stockkeeper, 3, see storekeeper.

Storekeeper, 3, responsible for receiving, disbursing and maintaining stocks of necessary materials.

Superintendent, 1, responsible for the general planning, supervision and direction of a group or groups and/or work of employees who carry out essential company or corporate functions. The rendering of electric service. Responsible for the training and welfare of personnel supervised.

Superintendent, assistant, 1, see superintendent.

Superintendent, shift, 1, see engineer, watch.

Supervisor (head or supervisor of departments, divisions, districts or branches), 1, responsible for the detailed planning, supervision and direction of a group or groups and/or work of employees who carry out essential company or corporate functions. The rendering of electric service. Responsible for the training and welfare of personnel supervised.

Supervisor, assistant, 1, see supervisor.

Tester, instrument, 1, a technical skilled in the testing, adjustment and repair of instruments, meters and relays, and the general testing of apparatus.

Tester, relay, 1, see tester, instrument.

Troubleman, overhead, 1, see lineman.

Troubleman, underground, 1, see cable splicer.

Water tender (operator, boiler), 1, see operator, boiler.

Welder, 1, highly trained welder competent to make the grade of welds required for high-pressure piping and equipment.

Yardmaster, 1, exercises general direction of handling of fuel or other materials at a power generating station or storage yard. Trains employees under his supervision.

Yardmaster, assistant, 1, see yardmaster.

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Two Cooperatives Protest Oklahoma Sales Tax

Right of the state to collect sales tax on sales of electricity by rural electric cooperatives is being fought in two suits filed recently in district court in Oklahoma City.

Cotton Electric Co-operative and the Alfalfa Electric Co-operative, Inc., have both filed claims against the Oklahoma Tax Commission, demanding return of March sales tax payments remitted by the two organizations under protest.

The cooperatives paid the sales tax for the first time on April 16.

Has Power Over Operating Companies, SEC Holds

Opinion in Jacksonville Gas case sets precedent; interpretation of sentence in Holding Company Act gives commission power to order reorganization of operating company capital structure

In a unanimous opinion, handed down last week in the case of integration proceedings involving the Jacksonville Gas Co., the Securities and Exchange Commission set a precedent of far-reaching importance in the interpretation of Section 11(b)(2), the recapitalization phase of the "death sentence" clause of the Holding Company Act. In brief, the SEC rejected completely the argument that it had no power to authorize or order the recapitalization or reorganization of the corporate structure of an operating company.

Jacksonville Gas Co., an operating subsidiary of American Gas & Power Co., had filed a voluntary plan, to which the parent company was a willing party, for compliance with the act. The SEC's decision approved the plan of reorganization, subject to certain modifications, including the willingness of the company to restore a limited participation, in the securities of the new company, to holders of unsecured notes and debentures. Under the plan, a new company, to be known as the Jacksonville Gas Corp., is to be formed to acquire all the assets of the present company and issue to the present company all of its securities. Half of the capital stock of Jacksonville Gas will be canceled as part of the plan and the new company will not be a subsidiary of American Gas & Power Co.

The commission's opinion rested on the interpretation of the last sentence of Section 11(b)(2) of the Holding Company Act, which reads as follows:

"Except for the purpose of fairly and equitably distributing voting power among the security holders of such company, nothing in this paragraph shall authorize the commission to require any change in the corporate structure or existence of any company which is not a holding company, or of any company whose principal business is that of a public utility company."

Counsel for certain holders of debentures and common stock of the company had raised the question of the commission's power to approve a plan such as the one proposed. The commission accepted the challenge and, while admitting that the sentence in question indicated a limitation on their power, held that it clearly implied the existence of an affirmative power.

"To say that we may not require a change in a specified company's corporate structure or existence," the opinion said, "'except for the purpose of fairly and equitably distributing voting power,' must mean, by necessary implication, that we *may require such change if it is for that purpose.* Thus, where voting power in an operating utility company is unfairly distributed among its security holders, the last sentence of Section 11(b)(2)—even without reference to other provisions of the section or the act as a whole—must be taken to indicate that we have the power to effect changes in such company's corporate structure or existence for the purpose of curing such unfair distribution."

UNVEILING—Boston Edison employees in active war service, now numbering about 215, were honored May 29 at the company's main offices, when Susan Toner, granddaughter of President James V. Toner, and a nine-month-old survivor of the Pearl Harbor attack, pulled a curtain from a special "war window" carrying the names of those with the colors. Memorial exercises recalling employees identified with World War I were conducted by the Association of Edison World War Veterans. A more permanent tablet is contemplated after the present emergency ends. L. to r., T. H. Carens, vice-president in charge of public relations; Susan Toner, daughter of Capt. James V. Toner, Jr., U.S.A.; Mrs. J. V. Toner, Jr., and James V. Toner, president of Boston Edison

Utilities Assist on Load Survey

Utilities are being asked by the WPB power branch to assist in compiling estimates of "curtailable loads" under terms of Limitation Order L-94 which sets up the machinery for power rationing.

Questionnaires have been given to utilities in the Southwest pool and in the war areas around St. Louis, Pittsburgh, Chicago, Detroit, and the Philadelphia-New Jersey pool asking their estimates of the effect of applying the restrictions on lighting, etc. in Exhibit A of the order and of shifting loads to night or weekend valley periods. The questionnaires also request an analysis of demand by classes of consumers, with an estimated breakdown between exempt and non-exempt consumers as defined in L-94, hourly load curves for a typical day and a typical week in July and December and the peak month.

Edward Falck, chief of the branch's supply allocation section, has been meeting with utilities personally in several regions to enlist their cooperation in gathering the data. Staff members have gone into other regions.

It is emphasized that the selection of areas for making load curtailment surveys does not mean that WPB is at this time preparing to invoke terms of the order.

Urges Caution in Buying Equipment for Blackouts

Present installations may prove inadequate — Specifications and regulations for acceptable apparatus now under consideration — Decision on official requirements to be made shortly

Utilities and industrial concerns of all types should be exceedingly cautious at this time in purchasing equipment for masking operations during air raid blackouts—anything installed now may prove to be inadequate to meet official regulations which are in the making.

This attitude is subscribed to by the Army, the Office of Civilian Defense and the War Production Board, all of which are concerned in getting final approval on a series of specifications and regulations for acceptable equipment which can be produced in adequate quantities.

Officials in all three agencies have expressed concern at the growing volume of new equipment and apparatus reaching the market today for sale as blackout protection. A great many of these articles are not adequate and their manufacture is simply a waste of critical materials and, to the purchaser, of money.

Study Specifications

Some officials have favored a restrictive order prohibiting the production of blackout equipment which does not meet official specifications—an order which today would halt all production—as was done for unauthorized civilian gas masks. Such an order is certain to be issued to prohibit either manufacture or sale of unauthorized equipment as soon as the official regulations are agreed upon.

Decision on what the official requirements are to be will be made shortly, within a few weeks at most. Getting WPB to agree to grant adequate priorities for such materials as steel and copper to permit production of authorized equipment is the current hurdle to clear. WPB originally turned a deaf ear to diverting any materials from direct war production, but this stand has been modified.

The official regulations are drawn up in three parts by the Army Engineer Board, covering blackout of buildings, street lighting during blackouts and blackout regulations for highway movement. The first two already have final War Department approval and OCD acceptance, but they still are not being released because much of the equipment could not be manufactured at present under existing WPB regulations. The specifications for equipment for moving vehicles are ready for final initialing, and negotiations are in progress between WPB and OCD looking to an allocation of materials for equipment for all three types of use.

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"End Use" Program Classifications

Utilities and their suppliers, as well as all other segments of American industry, have several definite parts to play in launching and keeping in operation the War Production Board's uniform "end use" classification system announced June 1.

The program, as formally issued, is designed to provide a constant kaleidescopic picture of the flow of all kinds of raw materials through the processing stages to ultimate end use—as that WPB will know where available supplies are going and be able to improve methods of allocating scarce stocks. The plan is not, however, a means for getting materials not now obtainable through existing priorities machinery.

For classification purposes, the system sets up 23 defined categories, most of which are subdivided into decimal fractions—thus, utilities are catalogued as "9" and electric companies are "9.10." WPB emphasizes that these numbers have no relationship to order of importance.

Letter symbols are provided to identify classes of purchasers, such as "USA" for Army, "USN" for Navy and Maritime Commission, and "DP" for domestic purchaser, the category into which utility orders fall.

Thus all electric utility orders are to be labeled: DP-9.10; this is in addition to all present markings including the P-46 endorsement, etc. There is an exception: Materials for the construction of buildings, even powerhouses where the building is part of a generating project, are to be designated with the number "22"—because WPB wants to keep track of all building construction.

Suppliers and manufacturers pass along the designations they receive on orders reaching them unless the supplier himself is dealing in a commodity which is set up as an "end use" article—such as operating supplies not to be physically incorporated into any product, screwdrivers as an example. In ordering these, utilities will place their own classification on the purchase voucher, but the manufacturer will change this to his own grouping in procuring the raw materials. Whether a product has an "end use" listing or not is something individual manufacturing concerns must determine from WPB's instructions and classified lists, available at field offices and in Washington as Release WPB 1259.

These Allocation Classifications must be applied to all orders placed after June 30, but WPB would prefer to have purchasing companies, at least, start sooner so as to make it easier for suppliers down the line to identify properly their own purchases by the deadline.

In addition, it is required that all orders which already have been placed upon which delivery is not due until after July 31 be given proper classification. This is the responsibility of the original purchaser—the utility in the power field.

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Reports Favorable Power Conditions

For the first time since September, 1940, Lake Burton, the largest storage reservoir of the Georgia Power system is full and the other lakes are at a high level. A year ago the Southeast was preparing for a voluntary rationing program due to an unprecedented rain fall deficiency.

As a result of these favorable water conditions as well as the addition on May 20 of the second 60,000-hp. steam unit in the Arkwright station officials of the company predict no power shortage in its territory this summer and fall provided normal rain fall continues.

The second Arkwright unit was completed in less than fourteen months. The first 60,000-hp. unit went into service in June, 1941, and the third unit of the same size is scheduled to go on the lines a year from now.

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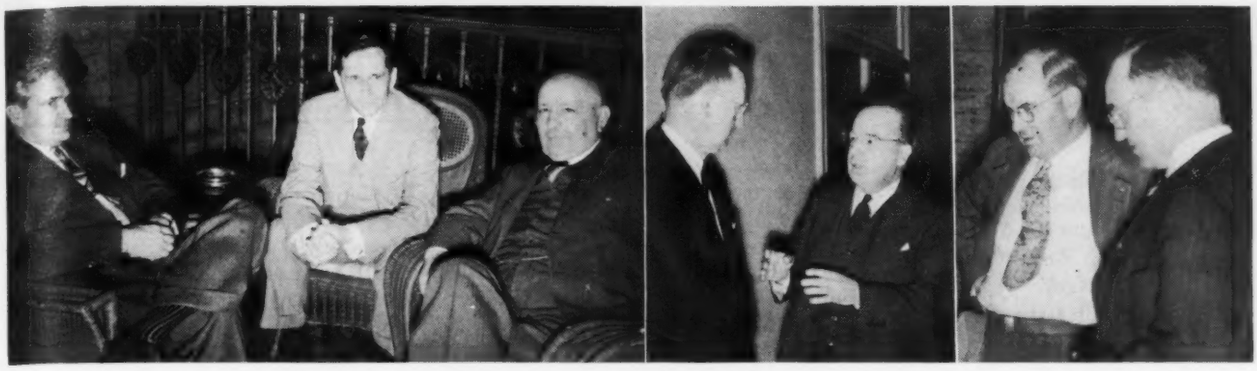
James G. White Dies

James G. White, engineer, contractor and investment banker, died at his home in Greenwich, Conn., on June 2, at the age of 80. Mr. White organized the engineering and contracting concerns of J. G. White & Co., J. G. White & Co., Ltd., of London and the J. G. White Engineering Corp. He had retired from business in 1928. His companies constructed power houses, power lines, electric railways and buildings in many parts of the world.



AT PACIFIC COAST MEETING—W. C. Mullendore, Southern California Edison Co.; Col. H. S. Bennion, Edison Electric Institute, and Paul M. Downing, Pacific Gas & Electric Co., converse between sessions of the Pacific Coast Electrical Association, which met last week at Fresno. Others attending the meeting included (left to right) H. C. Rice and R. G. Kenyon, Southern California Edison, and D. D. Smalley and L. J. Nevraumont, Pacific Gas & Electric

Discuss Wartime Problems at Pacific Coast Meeting

Conservation of man-power and materials, transportation, blackouts, appliance servicing and potential rationing feature business conferences of Pacific Coast Electrical Association, which met at Fresno last week

Such war-time operating conditions as conservation of man-power, materials, equipment and transportation, as well as dimouts, blackouts, appliance servicing, potential rationing and possible emergency operation under actual attack, featured two days of business conferences conducted by the Pacific Coast Electrical Association at Fresno, Calif., May 28-29 in lieu of an annual convention. Actual English experience was contributed to the meetings by W. D. Garbutt, electrical engineer, Hewitt Electric Company, London.

Complexities accompanying the recent Navy dimout order for the entire Pacific Coast from the Oregon line to Mexico were reported to involve costs of $1 per street lighting unit for shielding lamps and electroliers visible from the ocean. Dipping instead of painting one side of ornamental units were found advisable. Such improvisations as discarded coffee cans with a slot cut in one side which were welded or soldered to reflectors containing open lamps were reported. Paper mache cutouts inserted inside the glass of ornamental units also was cited as satisfactory. Col. H. S. Bennion of the E.E.I. stated that dimouts may ultimately involve curtailment of light emission 50 miles from the coast line to sky glow.

Experience with iron wire on extensions was pointed to as successful, with increasing quantities being purchased. Cases of such lines still in service in voltages ranging as high as 60 kv. from the last World War were reported. Solid rather than stranded guy wire gave the best service. Protective revetments around transformers would cause more burnouts than possible bomb damage unless proper ventilation was provided, and one case where a revetment had to be torn down to permit transformer maintenance was cited. To reduce the cost of such protective construction one company was experimenting successfully with adobe bricks made with earth and some form of bitumastic binder.

Personnel shortages due to military service or the attraction of skilled workers to war industries were reported. Job realignments were being made and women hired for work hitherto performed by men. Changes in collection and servicing programs were being made to conserve tires and man-power.

To explore the possible intangibles that may need selling in war-time as never before, the Business Development Section considered the "utilization engineer's" possible field of necessary operation in aiding dealers, interpreting orders and limitations imposed by the war boards, holding wiring adequacy as high as materials would permit, converting commercial and industrial salesmen, agricultural specialists, to new duties, and making lighting contribute man-hours of extra production by intelligent application.

Bert Reynolds told how Pacific Gas & Electric had opened its stockpile to dealers, conducted consumer classes for Red Cross centers on appliance maintenance and was inaugurating a big promotion campaign to steer to authorized dealer repair shops appliance repair business. E. F. Meise told how San Diego's Bureau of Radio and Electric

INTERCHANGE OF IDEAS DURING LUNCHEON—(Left to right)—P. P. Pine, San Diego Gas & Electric Co., Milo Cain, Coast Counties Gas & Electric Co.; Phil Carson, Graybar Electric Co.; Charles Davies, San Diego Gas & Electric; A. I. Long, Pacific Gas & Electric, and Arthur Bragg, General Electric

Appliances was training service men to fill dealers' shortages of skilled repairmen and directing store traffic to dealers so that the public might see the transitions they were making to other lines.

How lighting can add the equivalent of man-hours to production was shown in the section of the program presided over by Milo Cain, Coast Counties Gas & Electric, Santa Cruz. He had Walter Carlson and Sam Hazelton of the General Electric lamp department, Oakland, handle this subject and demonstrate with new light sources and color slides to show new industrial lighting applications.

At the noon luncheon R. E. Fisher, vice-president, P.G.&E. and chairman of E.E.I.'s sales committee, digested and highlighted the March conference of that committee in Chicago.

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Releases Silver to Replace Copper

An additional 60,000 tons of government silver, including all metal held as backing for silver certificates, is to be loaned to government war plants as a substitute for copper under a "friendly truce" reached by the Congressional silver bloc and Secretary Morgenthau. This will put virtually the entire 100,000-ton government hoard into war work.

Legislation permitting use of the monetized bullion is expected to be pushed quickly through Congress, in exchange for which Secretary Morgenthau has agreed that the Treasury will continue the present silver buying policy for the duration of the war. The Treasury now buys all domestic silver at a pegged price, roughly double the commercial market level.

In addition to being substituted for copper busbars in aluminum plants, it is expected the new supply of the white metal will be used in the plants to be built for manufacture of butadiene, principal component of synthetic rubber. Copper is ordinarily used in such plants both for busbars and for vats.

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Utility Line to Extend Through REA Territory

Arkansas Utilities Commission has granted the Arkansas-Missouri Power Co. authority to relocate a transmission line between Blytheville and Gosnell. The line extends through an area to be used as an army base. The new line will pass through territory allotted to an REA cooperative, which withdrew its objection to the proposal.

Engineers Hold War Production Meeting

Electrical construction labor is extremely hard to obtain in New Jersey; shortages of man-power in industrial production open a great opportunity for development and application of electrical devices in production; power supply in New Jersey is sufficient for 1942, probably will be for 1943. These are among the points of interest to the electrical industry brought out in the first of a series of war production conferences arranged by local engineering groups at the request of WPB, held at Newark, N. J., on May 29.

After a general dinner meeting at which the speaker was W. H. Harrison, WPB director of production, there were seven parallel sessions on different phases of engineering interest in war production, among them a panel on electrical problems under the chairmanship of M. D. Hooven, Public Service Electric & Gas. Discussion leaders and subjects were L. F. Stone, General Electric, "Electric Devices as Production Aids"; E. J. White, E. J. White Co., "Plant Rearrangement for Increased Production"; O. P. Cleaver, Westinghouse, "Improving Shop Lighting"; H. W. Bay, Public Service Electric & Gas, "Power Supply Problems"; C. E. Eiseman, General Electric, "Emergency Repairs and Rebuilding Problems"; H. P. Westman, secretary I.R.E., "Communication Equipment Production Problems."

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Extend Operative Period of Priorities Order P-46

Priorities order P-46, the utility repair and maintenance system, will remain operative at least through the third quarter of 1942, it was announced by the War Production Board this week. This represents a modification of WPB's previous intention of putting all "P" orders under the Production Requirements Plan by June 30, a policy opposed by the power branch in so far as P-46 is concerned.

Announcement of the decision to continue P-46 at least through September came in the form of a list of industries which will continue under existing procedures for the present. Others in the list, for the most part, also operate under special repair and maintenance plans.

The power branch is now studying the present order to determine what changes should be made in any amendment extending the expiration date. Present ratings are again inadequate to obtain new copper for fabrication into utility items.

NEWS BRIEFS

ILLUMINATION OF NIAGARA FALLS, discontinued last year to conserve power for war industry, was restored on Memorial Day. The decision to resume the lighting of the two great cataracts, American and Horseshoe, for 2½ hours nightly until September was made known by T. B. McQuesten, Ontario Highways Minister, and W. L. Houck, vice-chairman of the Ontario Hydro-Electric Power Commission.

WITH TRAVEL RESTRICTIONS and increased taxes keeping people at home to a greater extent, the public will probably use more electric service from now on, P. H. McCance, president Duquesne Light Co., reported recently before the Electric League of Pennsylvania. "In 1942," Mr. McCance said, "60 percent of our entire system output will be devoted to the war effort; 29 percent will be used in essential civilian and non-military services; . . . only 11 percent will be used for all other purposes. In World War One our system peak was 135,000 kw.; we are now carrying four times the load and producing almost five times the energy that we did in World War One."

TWO POLICE DOGS are on the payroll of the Philadelphia Electric Co. Their task is to protect a $500,000 coal pile on Petty's Island on the Delaware River. Nellie and Blackie, thoroughbred German shepherds, born on the island, undertook the job three years ago.

Among the 80 Japanese-owned patents seized by Alien Property Custodian Leo T. Crowley this week were those covering manufacture of incandescent bulbs. Also seized this week were all of the patents owned by Robert Bosch, covering such items as ignitions, magnetos and fuel injectors for Diesel engines.

FOLKS IN OMAHA who want an electric coffee urn, grill, toaster or any other appliance that is hard to get these days are turning to Nebraska Power Co.'s new appliance exchange (swap) department. Lots of times the company has been able to round the appliance up from somebody who wants to turn it in for cash or what-have-you.

TVA ANNOUNCES THE PUBLICATION of a technical report on the Chickamauga project, covering its planning, design, construction and initial operations. The report, containing 451 pages and 97 illustrations, is one of a series of technical reports on projects completed by TVA.

Plant Changes Increase Capacity, Energy Output

Increasing height of dam flashboards, rewinding generators and utilizing excess power from local sawmills are some of the methods used by Washington Water Power to supply power needs

To meet war demands for power, Washington Water Power Co., in recent months, has made changes in its hydro-electric plants which have increased capacity and energy output; made connection with Spokane's municipal plant, from which it derives 4,000,000 kw.-hr. of energy annually, and utilized excess power from five sawmills in its territory.

At three power stations of the company the height of flashboards on dams was increased. The addition of 18-in. flashboards on the Post Falls station dam produced 150 kw. on peak and increased reservoir storage capacity by 30,000,000 kw.-hr. of firm power annually; at the Little Falls station, a 3-ft. addition in the height of flashboards added 3,200,000 kw.-hr. of annual energy output, which was upped another 10,000,000 kw.-hr. later by rewinding generators 1, 2 and 3 — a change which also increased capacity from 25,900 kw. to 33,000 kw.; at the Oroville plant a 1-ft. increase in flashboard height on the dam resulted in an additional 60,000 kw.-hr. of energy and allowed peak to be carried over a three-hour period as against 1½ hours.

Other changes were recorded at the Nine-Mile station, where ventilator fans, reducing generator room temperature, increased plant capacity from 12,000 to 16,000 kw. and added approximately 4,000,000 kw.-hr. annually in energy output. At the Grangeville plant the addition of a 2,250-hp. waterwheel and 1,000-kva. generator with liberal overload capacity, four new 333-kva. transformers and 135 ft. of new 6-ft. wood stave pipe line increased the plant's capacity from 625 to 1,000 kw. and annual energy output by 1,500,000 kw.-hr. Two other changes helped: At the Upper Falls plant removal of restrictions on plant pondage, through an arrangement with a sawmill operator, brought an increase of 2,000 kw. capacity; at Dalkena, more flexibility of plant operation was obtained by installing a remote-control headgate at the dam which increased capacity for peaking purposes by 300 kw.

Power From Sawmills

At one sawmill the plant was unable to furnish power on peak, but was able to furnish power during night hours, enabling the utility to store 4,000,000 kw.-hr. of additional power in its reservoirs. Three other mills are supplying excess power on the same basis and in aggregate supply 7,100,000. A fifth mill, at Lewiston, Idaho, installed a 10,000-kw. steam turbine unit on a mutually profitable basis, the mill already having the necessary boiler capacity. They had been previously supplied with 6,000 kw. on peak—strictly prime load—by the utility. But with the new generator the mill operator took on the 6,000-kw. load and furnished the utility with 4,000 kw. additional—the latter showing a net gain of 10,000 kw. capacity.

VICTORY HOME CENTER—To help Chicago homemakers adjust their mode of living to war-time conditions, Commonwealth Edison has opened Victory Home Centers in its ten neighborhood offices. Here home service advisors give suggestions on nutrition and economy meals, tell customers the best foods to buy, how to prepare them, store them, and ways to use leftovers. Daily menus are demonstrated and distributed

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Set Hearing on Power Factor Penalty Clause

To determine the practicability of a uniform power-factor penalty clause, the Connecticut Public Utilities Commission ordered electric utility representatives to appear at the board's offices in Hartford this week to show why the following clause should not be adopted in any rate schedules proposing a penalty:

When the highest kva. of reactive demand, measured over the demand interval, exceeds 50 percent of the kw. demand for the same month an additional charge will be made in the amount of 25 cents per kva. of such excess reactive demand. The ratio between active and reactive demands may be determined either by continuous measuring instruments or by periodic tests at reasonable intervals and if determined by test the resulting ratio will remain in effect until a new determination is made.

Loads below a specified demand may be specifically exempted in particular schedules. Utilities agreeing to the imposition of the clause above quoted will be exempted from attendance on prior notification of the commission by letter. Conferences between the commission and utilities continuing since last October resulted in inability to agree upon a uniform clause.

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Minimum Requirements of Code to be Met

Only the minimum requirements of the National Electrical Code will be met in installing conductors, and the use of metallic conduit will be eliminated if possible, the Federal Works Agency said recently, listing 200 items which it has eliminated, as far as is practicable, from the construction of war public works projects.

Some 1,500 projects are authorized under the war public works program and they are being permitted to continue, according to Brig-Gen. Philip B. Fleming, Federal Works Administrator, with a strict application of the policy of restricted use of critical materials to an "irreducible minimum."

Mountain States to Spend $841,004

The 1942 construction program of the Mountain States Power will require capital expenditures of $841,004, according to the annual report of the company sent to stockholders recently. During 1941 the company made gross property additions of $1,038,002, the report said.

Major improvements included increase in the capacity of the company's Springfield, Ore., steam plant by the addition of a 5,000-kw. unit and an additional 2,500-kw. steam turbo-generator at the Dallas, Ore., plant.

Gross income, the company reported, was $55,691 below the preceding year; net income of $690,039 for 1941 was also below the 1940 figure by $4,353.

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Added Output from Stand-by Units

The Los Angeles Bureau of Power & Light is considering the complete rehabilitation of a 4,000-kw. turbine unit that has been out of service for several years, officials indicated recently, as part of a drive for securing added output from existing steam facilities.

Looking forward to peak loads in the winter of 1942, the bureau has been working over standby steam plants which are maintained principally for emergency operation. In addition to normal overhaul, including the checking of all boiler settings at one such station, new induced-draft fans have been installed at another station to increase capacity to compensate for reduction in height of the stack prior to acquisition of the plant by the bureau. A quick-starting house-generating unit has been installed in order to provide for more reliable operation of the plant in emergencies. In addition, secondary nozzles have been added to one of the steam turbines in the station to increase its capacity. Even oil tankage in being provided for emergencies, though the plant is within one mile of an oil field.

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Utility Sale Contracts Approved by Commission

Hydro-Electric Commission of Oregon has approved recently two contracts for the sale of parcels of West Coast Power Co.'s electric properties, for which revenue bonds were recently authorized by the two PUDs involved.

The properties in negotiation are generating plants, transmission lines and distribution lines in Lincoln, Lane and Douglas Counties, which the Central Lincoln County PUD has agreed to buy at $750,000, and properties in Clatsop County to go to the Clatskanie PUD for $150,000. In each case the properties extend well beyond the boundaries of the PUDs.

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House Vetoes Review of Washington Rates

The House of Representatives vetoed plans of the District of Columbia Public Utilities Commission for an investigation of Washington's famous "sliding scale" rate plan in approving the district's 1943 fiscal year budget.

An $85,000 item requested by the PUC to finance employment of eight more staff members and pay expenses of the special inquiry was stricken from the district bill by the House appropriations committee, an action which the House subsequently approved. The committee said it was not convinced of the need for an increased staff nor of the feasibility of embarking upon an inquiry of the gas and electric companies "during this period of unstable conditions."

This year marked the first year in more than a dozen that the sliding scale plan has not brought Washington an electric rate reduction—due to increased taxes and expenses. The proposal for the investigation came from the commission's new chairman, Gregory Hankin, formerly special counsel for the Federal Power Commission.

MEETINGS

Previously Listed

American Society of Mechanical Engineers—Semi-annual meeting, Statler Hotel, Cleveland, Ohio, June 8-10. C. E. Davies, national secretary, 29 West 39th St., New York, N. Y.

Edison Electric Institute—Annual meeting, Hotel Biltmore, New York, N. Y., June 11. Col. H. S. Bennion, managing director, 420 Lexington Ave., New York, N. Y.

Canadian Electrical Association—Annual convention, Seigniory Club, Que., June 11-12. B. C. Fairchild, secretary, 804 Tramways Bldg., Montreal, Que.

National District Heating Association — Annual meeting, Dayton Biltmore Hotel, Dayton, Ohio, June 11-12. John F. Collins, Jr., secretary-treasurer, 827 N. Euclid Ave., Pittsburgh, Pa.

Public Utilities Advertising Association—Annual convention, Hotel Commodore, New York, N. Y., June 22-24. E. N. Pope, secretary, Carolina Power & Light Co., Raleigh, N. C.

American Society for Testing Materials—Annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 22-26. R. E. Hess, assistant secretary, 260 S. Broad St., Philadelphia, Pa.

American Institute of Electrical Engineers—Summer meeting, Drake Hotel, Chicago, Ill., June 22-26. H. H. Henline, national secretary, 33 West 39th St., New York, N. Y.

American Society of Agricultural Engineers—Summer meeting, Milwaukee, Wis., June 29-July 1. Raymond Olney, secretary, Saint Joseph, Mich.

Society for the Promotion of Engineering Education—Annual meeting, Columbia University, New York, N. Y., June 29-July 2. F. L. Bishop, secretary, University of Pittsburgh, Pittsburgh, Pa.

Five-Year Capacitor Program in One

Largest single item in a Northwestern utility's budget construction budget for 1942 is the installation of 700 capacitors, according to the general superintendent of the company. The $100,000 construction program will boost the load-carrying ability of the company's Portland, Ore., distribution system by nearly 10,000 kva.

Originally the capacitor installation had been set up as a project covering several years, with only $20,000 alloted for work this year. At that rate it would have taken five years. To supply power in this war area, however, the program was rushed into effect. The capacitors are being located in necessary quantities at load centers on the 2,400-volt distribution system as determined from maps prepared after actual load tests on individual feeder lines.

•

Emergency Specifications Developed by A.S.T.M.

To expedite procurement and conservation of critical or strategic materials during the national emergency, technical committees of the American Society for Testing Materials have developed important emergency specifications.

The committees which have taken emergency action include the following: A-1 on steel, A-5 on corrosion of iron and steel, A-10 on iron-chromium-nickel alloys, B-1 on copper wires for electrical conductors, B-2 on non-ferrous metals and alloys, B-5 on copper and copper alloys, B-6 on die-cast metals and alloys, D-1 on paint, varnish, lacquer, D-11 on rubber products and D-12 on soaps and other detergents.

•

Funds Advanced Against REA Allotments, $756,241

Funds advanced against allotments made by the REA to power systems financed by that agency totaled $756,241 for the week ended May 15, the Department of Agriculture has announced.

Making up the total were items of $43,078 from regular funds appropriated by Congress in 1938, 1939 and 1940, and $713,162 from amounts which REA was authorized to borrow from RFC funds of 1937, 1939, 1941, and 1942. REA Administrator Harry Slattery pointed out that these funds are being advanced against construction only in accordance with authorizations or regulations of the WPB.

NEW

.. to help you plan protective lighting

You need the new L-M Bulletin "Light Up To Protect War Production" to help you plan effective protective lighting. If you have not yet received your copy, send for it at once.

This helpful bulletin explains the principles of protective lighting, discusses mounting arrangements and typical layouts, describes in detail the complete L-M lighting services and tells how these services may be enlisted to assist you.

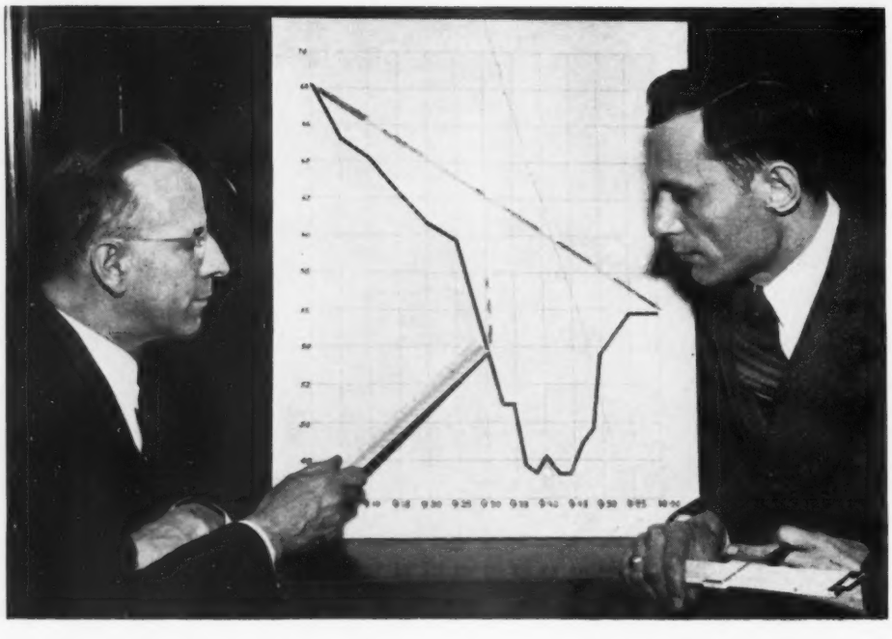
Also shown and described are the principal L-M Protective Lighting Luminaires and the accessory equipment necessary to a complete installation.

Be sure you have this bulletin if you are concerned with Protective Lighting — ask your L-M salesman or write Line Material Company, 806 N. 8th Street, Milwaukee, Wisconsin, for L-M Bulletin 4231.

FOR VICTORY BUY UNITED STATES DEFENSE BONDS STAMPS

LINE MATERIAL COMPANY

TRY OUT NEW TRUCK UNITS—Florida Power Corp. line crews at St. Petersburg try out one of four new tractor, semi-trailer units (Dodge) recently added to the company's fleet. Driver and helper are in the tractor-cab and the crew members are in the storm-proof compartment. A pole carrier is coupled to the semi-trailer. The trucks provide ample space for carrying materials and equipment



MARINE TURBINE WELL AHEAD OF SCHEDULE—First C-3 cargo ship turbine, from a new eight-acre inland plant, two months ahead of schedule, was General Electric's contribution to the recent celebration of Maritime Day. Factory production for the rest of the year will be a third larger than originally planned, officials of the company estimated. In the picture the turbine is shown being crated for shipment

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PREMATURE BLACKOUT—L. C. Van Inwegen of Jersey Central Power & Light indicates to George Savonis 9:30 p.m. on a load curve, which is the hour at which a recent test blackout was to begin. However, customers started turning out their lights at 9:05 p.m. and by 9:30 had turned off 8,000 kw. of lighting load, effecting a premature blackout. The remaining 7,000 kw. necessary for the blackout was turned off by 9:37 p.m.

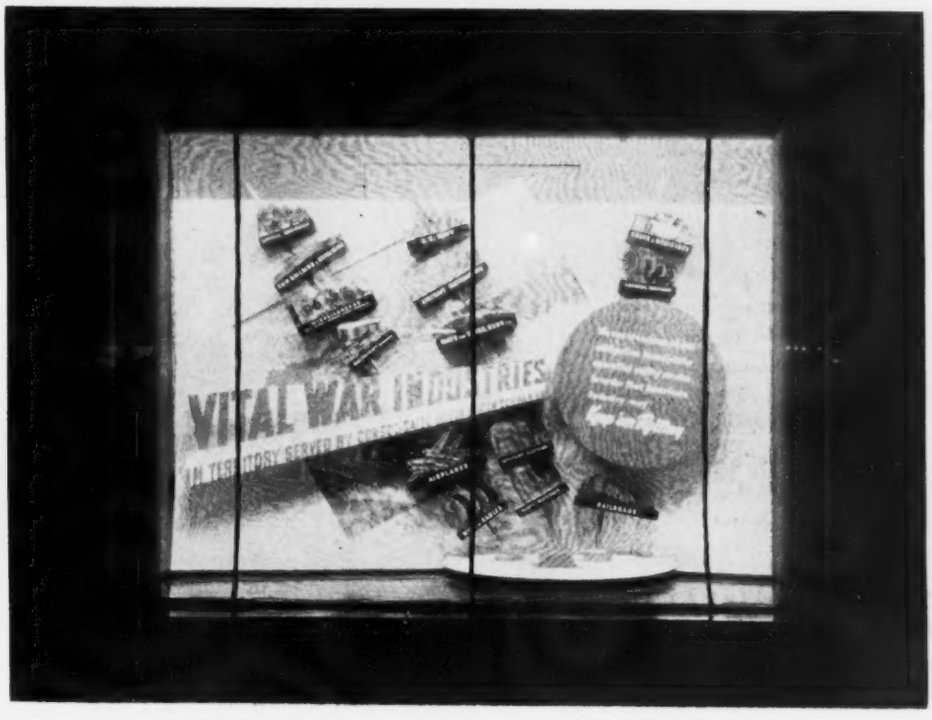
INDUSTRY

N PICTURES

...—Roy S. Spaeth, lineman for the Los Angeles ...ht, was awarded the National Safety Council's ...tly for saving the life of a fellow-worker who ... a 2,400-volt circuit. Spaeth freed the man and ...citation. C. Clarke Keely, chairman of the ... the Board of Water and Power Commissioners, ... makes the presentation

...Y—First home economist of the Edison General ... (Hotpoint) Miss Bernice Lowen, left, cuts an ... recent luncheon in Chicago, celebrating the ...e department, founded in 1917. Miss Clara ... home economics director for the company

"DIMMING OUT" LIGHTED STORE WINDOWS—A simple method of cutting glare and reflection which contribute to sky-glow has been developed by Consolidated Edison of New York. The device is a black cotton netting curtain pulled down from a roller directly behind the window glass. Tests made with light meters showed that the light was reduced an average of 75 percent when the meter was placed against the show windows. In the illustration above is a typical show window, before the curtain was used, showing the spill-over of light to the sidewalk. In the picture below the curtain is in use and only the interior of the window is lighted

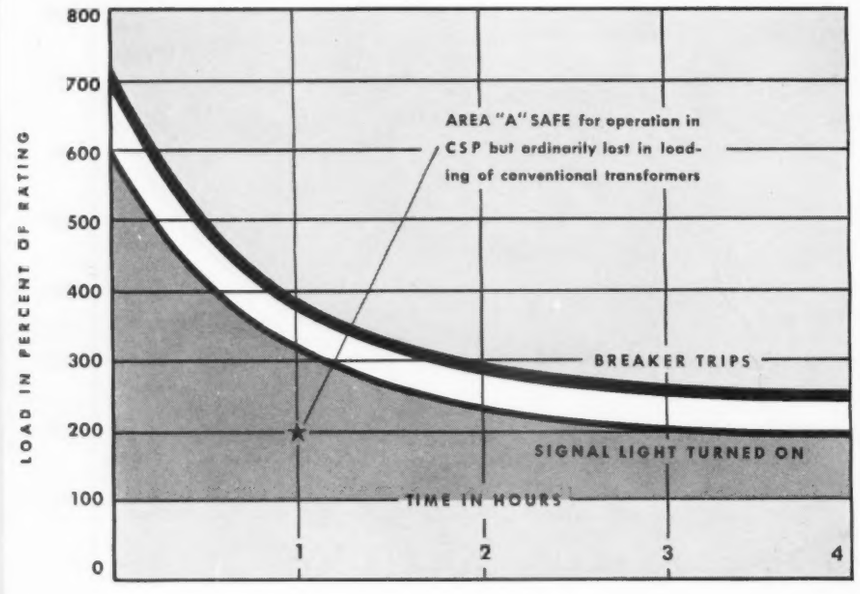


More Peak KV-A for Your Money with CSP Transformers

With Westinghouse CSP (Completely-Self-Protected) Transformers, full protection against the major causes of transformer failure—lightning, internal faults and dangerous overloads—is built in, thus assuring the highest possible continuity of service and permitting higher, longer peak loads to be safely carried. Cores of Hipersil*, the new steel developed by Westinghouse engineers, result in smaller transformers which mean a timely saving in the use of steel and copper.

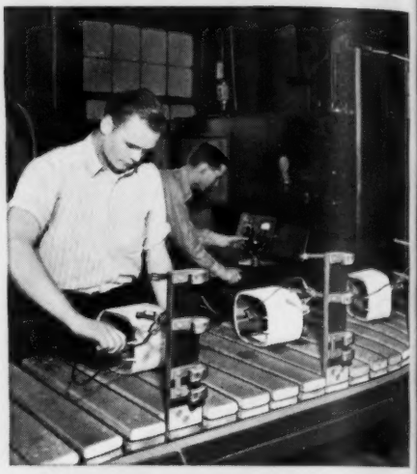
WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, EAST PITTSBURGH, PA.

EXTRA LOADING AREA GAINED WITH OPERATION BY COPPER TEMPERATURE



FULL USE OF TRANSFORMER CAPACITY is a major advantage of the Westinghouse method of overload protection. Whether a load is safe or not, is determined by the actual temperature of the copper windings, not by the load's relation to the *rated* capacity of the transformer. Thus, the transformer is not only protected against damage caused by excessive overload, but loading much closer to the actual thermal limit of the windings is possible. Added load area "A" (chart above), which is available in CSP Transformers, takes care of practically all short-time useful overloads without tripping the transformer from the line—thus the continuity of service is greatly increased.

ACCURATE CALIBRATION OF BREAKERS is a vitally important link in the Westinghouse method of protection against dangerous overloads. In the photograph below, breakers are shown being calibrated under actual operating conditions—while submerged in transformer liquid at the proper temperature. Compensation for ambient temperature is automatic.



HIGH FREQUENCY TESTING of transformer coils, shown above, detects insulation faults between turns. Also, every CSP Transformer incorporates protective links between the windings and the high-voltage bushings to prevent line lockout should an internal fault occur in service.

COMPLETE PROTECTION of transformers against lightning outages is necessary to service continuity. The workmen shown above are about to submit a CSP Transformer to a direct stroke of lightning which, because of the exclusive Westinghouse method of protection, will have no harmful effects. J-9705

Westinghouse

*Registered Trademark Westinghouse Electric & Mfg. Co., 1934.

Less Slow-Down in Decoration Day Week

Decoration Day was less of a holiday for industrial workers this year than in the past, as shown by the Edison Electric Institute figures for the electrical energy distributed by the power industry for the week ended May 30. The amount distributed this year was 3,322,651,000 kw.-hr., which was 57 million kw.-hr., or but 1.7%, less than the previous week. Last year the drop was 86 million kw.-hr., or 2.5%, and in 1940 it was 111 million kw.-hr., or 4.3%.

The May 30 week showed a spurt in the percentage increase over the corresponding week of the previous year, the figure being 12.5%, compared with 11.2%, 11.5%, 11.6% and 12.2%, established in the four previous weeks. This greater gain was general throughout all sections of the country except the South. New England, showing the most rapid rise, went up 14.6%, against a gain of but 7% for the last week in April.

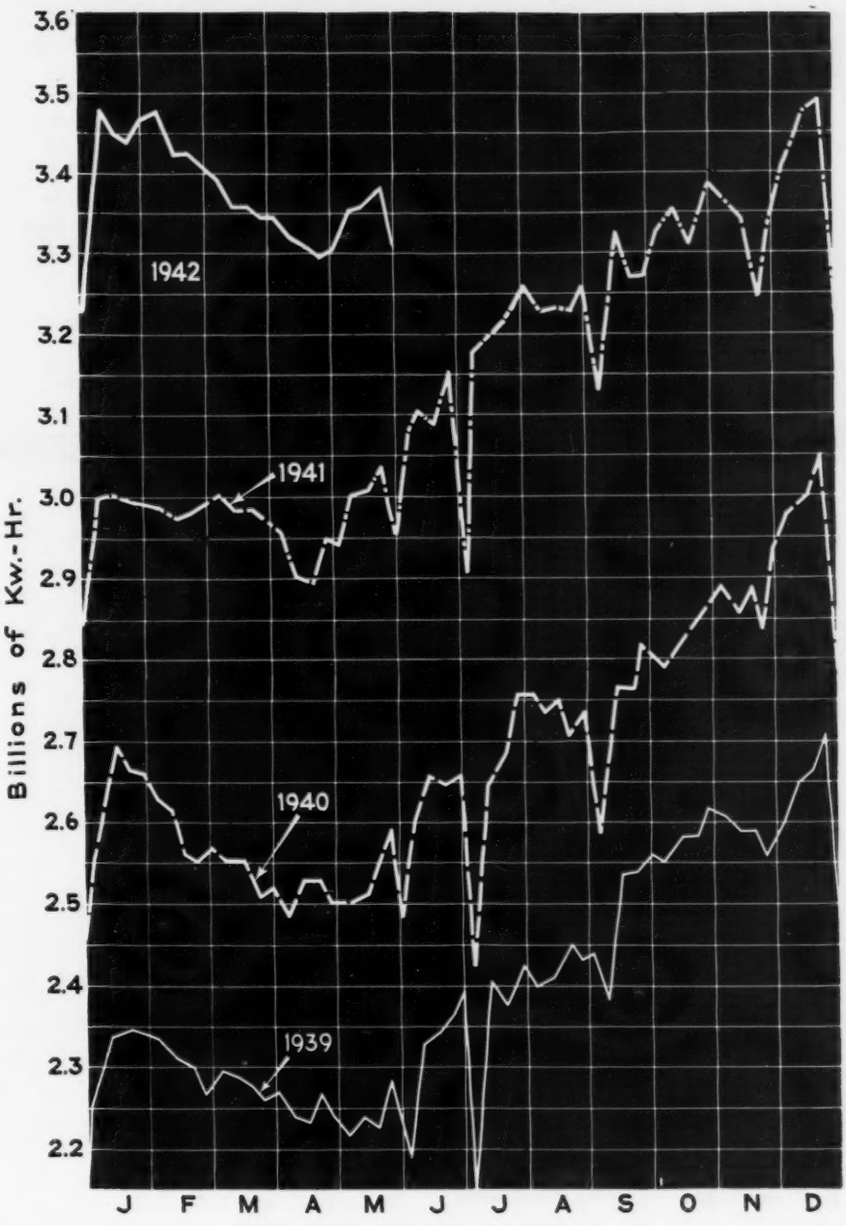
Weekly Output, Millions Kw.-Hr.

1942		1941		1940	
May 30	3,323	May 31	2,955	June 1	2,478
May 23	3,379	May 24	3,040	May 25	2,588
May 16	3,357	May 17	3,011	May 18	2,550
May 9	3,365*	May 10	3,003	May 11	2,515
May 2	3,304	May 3	2,944	May 4	2,503
Apr. 25	3,273*	Apr. 26	2,950	Apr. 27	2,499
Apr. 18	3,308	Apr. 19	2,897	Apr. 20	2,529
Apr. 11	3,321	Apr. 12	2,906	Apr. 13	2,530
Apr. 4	3,349	Apr. 5	2,960	Apr. 6	2,494
Mar. 28	3,346	Mar. 29	2,975	Mar. 30	2,524

Percent Change from Previous Year

	Week Ending		
	May 30	May 23	May 16
New England	+14.6	+ 9.0	+ 8.7
Mid-Atlantic	+ 9.2	+ 8.2	+ 8.4
Central Industrial	+12.6	+ 9.0	+ 9.3
West Central	+10.4	+ 8.2	+ 8.2
Southern States	+10.7	+15.4	+16.7
Rocky Mountain	+ 7.0	+ 4.6	+ 2.5
Pacific Coast	+22.1	+19.2	+19.6
Total United States	+12.5	+11.2	+11.5

*Revised figure.



Average Daily Hydro Output at New High

The average daily production of electric energy by water power during April reached an all-time high at 198,568,000 kw.hr., the Federal Power Commission reports. Production by water power in April amounted to 5,579,776,000 kw.-hr., or 38.9 percent of the total output for public use.

Total of electric energy produced for public use during the month amounted to 14,333,988,000 kw.-hr., an increase of 13.1 percent over production in April, 1941.

For the twelve months ended April 30, 1942, the report shows, total production for public use was 172,115,793,000 kw.-hr. This represents an increase of 16.2 percent over the previous twelve months.

Capacity of generating plants in service in the United States on April 30, 1942, totaled 45,045,691 kw., a net increase in twelve months of 317,283 kw.

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Canadian Output Rises 14.4% Over Last Year

Central electric stations in Canada produced 3,062,740,000 kw.-hr. in April, compared with 3,220,953,000 kw.-hr. in the previous month and 2,693,353,000 kw.-hr. in the corresponding period last year, the Dominion Bureau of Statistics reports. The increase over a year ago was 14.4 percent. Total production for the first four months of this year was 12,394,420,000 kw.-hr., compared with 10,366,931,000 kw.-hr. in the corresponding period last year.

Exports to the United States totaled 216,355,000 kw.-hr. in April, compared with 216,110,000 kw.-hr. in the previous month and 211,594,000 kw.-hr. in April, 1941.

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SEC Presses Proceeding

Securities and Exchange Commission issued this week an order reconvening its proceedings against the Commonwealth & Southern Corp., this time under Section 11(b)1 of the holding company act, or the integration phase of the "death sentence" clause. The SEC, which on April 9 issued an order under Section 11(b)2 of the same act, directing Commonwealth & Southern to reduce to a single class of stock (namely the common), ordered that the integration hearings be started on June 16.

NEWS ABOUT PEOPLE

Bird Assumes New Duties with Savannah Electric

Walter M. Bird, formerly president of the Western Public Service Co., Scottsbluff, Neb., is now operating vice-president of the Savannah Electric &

Power Co., Savannah, Ga. A native of Massachusetts and a graduate of the Lawrence Scientific School of Harvard University, Mr. Bird was identified with the Puget Sound Power & Light Co. before becoming president of the Western Public Service Co. in 1936.

Mr. Bird resigned as head of Western Public Service early this year, when the Nebraska and South Dakota properties were sold to the Consumers Public Power District of Nebraska.

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▶ W. J. PARKER has been appointed acting managing director of the National Electrical Wholesalers Association to succeed E. Donald Tolles, who has retired from that position. Mr. Tolles will continue to serve the association as treasurer. Mr. Parker has been engaged in organizing and directing the activities of national trade associations for the past 25 years. Prior to trade association management Mr. Parker was engaged in the mortgage investment security business and coal mining, both in Cleveland, Ohio, and in New York. He is a former president of the New York Trade Association Executives and is a member of the American Trade Association Executives.

▶ JOSEPH E. CONLON of South Orange, N. J., has been elected president of the New Jersey Board of Public Utility Commissioners, succeeding the late Frank J. Reardon of Jersey City.

▶ H. H. ROGGE, manager of the government office of the Westinghouse Electric & Manufacturing Co., has been awarded the Westinghouse Order of Merit for distinguished service. Mr. Rogge was cited for his capable management of the company's government business at a critical time.

▶ JAMES F. FAIRMAN, assistant vice-president of the Consolidated Edison Co., New York, was recently elected president of the New York State Society of Professional Engineers.

▶ WILLIAM M. DENNY has been named manager of the contract service department of General Electric Co. He succeeds Frederick P. Wilson, who has retired after 51 years' service with the company. A graduate of Texas A. and M. College, Mr. Denny entered the employ of General Electric in 1921. Since 1929 he has been assistant manager of the department he now heads.

▶ W. A. SHOUDY has withdrawn from Orrok, Myers & Shoudy Associates, New York, to devote his entire time as engineer in charge, utilities division, for the Chemical Construction Corp., New York. Mr. Shoudy's experience covers many years of service in the engineering field, both with public utility companies and industrial organizations. George A. Orrok and David M. Myers will continue their practice in consulting engineering as Orrok & Myers, Associates.

W. C. Johnson to Direct Allis-Chalmers Sales

William C. Johnson, sales manager of the crushing and cement division of the Allis-Chalmers Manufacturing Co., has been named manager of the company's general sales organization. Until his election as president, Walter Geist directed the general sales organization, first as general representative and later as vice-president.

A native of Birmingham, Ala., Mr. Johnson joined the Allis-Chalmers organization in 1924. Through the experience gained in the company's various shops Mr. Johnson became an expert on crushing machinery and traveled extensively to service this type of equipment.

In 1929 he was made the representative of the crushing and cement division in the Atlanta, Ga., district, which included seven southeastern states. In

1935 he went to Chattanooga, Tenn., in a general sales capacity, and two years later he opened up a company district office at Knoxville, Tenn., where he handled contracts with the Tennessee Valley Authority, the aluminum and phosphate industries. Early in 1940 he returned to Milwaukee as sales manager for the crushing and cement division.

▶ROY E. MCCULLOUGH has been appointed manager of the Brazil, Ind., division of the Public Service Co. of Indiana, to succeed HARRY D. FALLS, retired. Mr. Falls has been head of the division for many years.

▶ERNEST C. SCHLEUSENER has been appointed assistant vice-president of the Oliver Iron & Steel Corp., Pittsburgh, Pa.

▶FRANK H. DEWEY, general manager of the air conditioning division of Gar Wood Industries, Inc., Detroit, Mich., has been elected a vice-president of the company. Mr. Dewey will continue his duties as general manager of the air conditioning division.

▶ROBERT L. COE, vice-president of the Chase Brass & Copper Co., Inc., was elected president of the Copper and Brass Research Association at the annual meeting held recently in New York.

▶E. ALLISON THORNWELL, regional representative of G & W Electric Specialty Co. and president of E. A. Thornwell & Co., Atlanta, Ga., electrical and machinery equipment company, has recently been appointed OPA administrator for the state of Georgia. Mr. Thornwell, who succeeds T. M. Forbes, state rationing administrator since the curtailment program began, is a graduate of Clemson College, S. C., and for many years was connected with the Western Electric Co. in Atlanta.

▶DRESSEL D. EWING, professor of electrical engineering at Purdue University, Lafayette, Ind., has been made head of the electrical engineering school to succeed the late Dr. Charles F. Harding. Professor Ewing has been connected with the teaching staff of Purdue since 1913. He is a fellow of the American Institute of Electrical Engineers, past president of the Indiana Engineering Society and a member of the Society for the Promotion of Engineering Education and of the American Transit Association.

▶WILLIAM WATSON, vice-president of the Allis-Chalmers Manufacturing Co. in charge of manufacturing, has retired. He is 74 years of age. Mr. Watson, who had been associated with the company since its organization in 1901, will be succeeded by JAMES M. WHITE, general works manager. Mr. Watson will remain with the organization in an advisory and consulting capacity. Mr. White entered the Allis-Chalmers graduate-training course in 1929 and for six years was manager of the La Porte, Ind., plant, before being transferred to Milwaukee as general works manager.

Koelbel Made Manager of Jackson Properties

Herman H. Koelbel has been appointed manager of the Jackson division of Consumers Power Co. to succeed Floyd D. Avis, resigned. Mr. Avis resigned to devote his full time to private business and agricultural interests.

Mr. Koelbel joined the Consumers'

organization in 1915 at Muskegon, as a member of the sales department. Seven years later he was transferred to Jackson as assistant to F. W. Hoover, who was in charge of security sales for Consumers and the several other companies now constituting the northern division of the Commonwealth & Southern Corp. Mr. Hoover was succeeded in this position by Dan E. Karn, and when Mr. Karn went to Kalamazoo in 1937 as division manager Mr. Koelbel assumed charge of security sales.

Since 1933 he has been supervisor of dealer cooperative merchandising for Consumers, with the responsibility of promoting sales of electric and gas merchandise by appliance dealers, department stores and hardware dealers throughout the Consumers service area.

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▶IRA A. TERRY has been appointed general assistant to H. A. Winne, General Electric vice-president in charge of design engineering, apparatus department. WALTER C. HECKMAN of the G.E. turbine engineering department has succeeded Mr. Terry in the works manager's office.

▶FREDERIC N. BUSHNELL, vice-chairman of the board of the Stone & Webster Engineering Corp., Boston, was awarded a 50-year A.S.M.E. service pin by President James W. Parker of the American Society of Mechanical Engineers, at a meeting May 21 at the Massachusetts Institute of Technology. The citation given Mr. Bushnell referred to his early work as an engine builder in Providence, R. I., his service as chief engineer of the Narragansett Electric Lighting Co., and Rhode Island Co., and many years as chief engineer and then engineering manager of the Stone & Webster organization, with constructive contributions to high-pressure steam plant development and nation-wide engineering undertakings.

▶RALPH ELSMAN, formerly executive vice-president of General Water, Gas & Electric Co., chief subsidiary of the International Utilities Corp., has been elected president of that organization. Mr. Elsman fills a position which has been vacant since the resignation of P. M. Chandler.

▶FRED J. NEMETH, formerly associated with the H. V. Varney Co., Cleveland, Ohio, has recently been appointed assistant to R. G. Alexander of the Standard Transformer Co., Warren, Ohio. Mr. Nemeth will assist in sales promotion and advertising work.

▶DAVID J. O'CONNOR has been appointed city electrician of Cambridge, Mass., succeeding Timothy C. O'Hearn, who retired after 39 years' service. Mr. O'Connor has been senior inspector of the department for many years, following connections with the Bell Telephone Laboratories, Inc., and Western Electric Co., Inc., New York.

OBITUARY

▶GEORGE H. HODENPYL, who was connected with the Commonwealth & Southern Corp. from 1916 until his retirement in 1941, died on May 25. He was 91 years old.

▶GEORGE W. STETSON, 65, president of the Stets Regulator Co., Boston, Mass., and long prominent in the power plant equipment supply field in that area, died at Hingham, Mass., on May 21.

▶WILLIAM E. FREEMAN, assistant dean of the University of Kentucky college of engineering since 1922, died on May 21, in his sixty-second year. He had been associated with the university since 1911. Mr. Freeman had been president of the Kentucky section of the Society for the Promotion of Engineering Education and was a vice-president of the American Institute of Electrical Engineers from 1931 to 1933.

▶HENRY D. SEARS, 76, formerly general sales manager of the Webber Electric Co., Schenectady, N. Y., died at Worcester, Mass., on May 23. He was a graduate of the Massachusetts Institute of Technology and was connected with the General Electric Co. in his early career, later becoming widely known in connection with the manufacture of wiring devices. Mr. Sears retired eight years ago.

MANUFACTURING-MARKETS

Labor-Management Groups Report

Shipments from the Westinghouse Electric & Manufacturing Co.'s division at East Pittsburgh, Pa., were 60 percent higher in the first quarter of 1942 than in the comparable 1941 period, the plant's labor-management committee has reported to the War Production Board. This record compares with an increase of 24.4 percent in the number of employees and an increase of 48.3 percent in the payroll. Production at the Westinghouse lighting division has increased 17 percent in the first month of the plant's "Quicker 4 Victory" drive, which was launched in April.

The Westinghouse committee's report was one of several typical labor-management reports released recently by WPB to indicate the trend of the War Production Drives campaign.

Another report from the metal division of Philco Corp., at Philadelphia, stated that "we feel that as a result of this committee, production in this division has been increased over 4,000 items since April 1." From the Thompson Products, Inc., makers of plane specialties at Cleveland, came the telegraphed report that March production broke all records, exceeding the entire 1939 output.

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U. S. Intervention Denied

Application by the anti-trust division of the Department of Justice for leave to intervene in a patent infringement suit brought by the General Electric Co. against Hygrade Sylvania Corp. was rejected this week by Federal Judge Vincent L. Leibell.

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Edison Workers Honored in Production Campaign

As a part of the "Work to Win" program of the Thomas A. Edison Industries, Inc., West Orange, N. J., 23 men and three women employees of the company received awards this week from Mrs. Thomas A. Edison, widow of the inventor, for original and useful suggestions to speed up the war materials production of the plant.

The gold and enamel pins, bearing the three dots and dash of the "V" emblem, were awarded in the laboratory of the late inventor. Eugene C. Reed, assistant vice-president of the company, presided at the ceremony. Also participating were Captains D. V. McMarsters and E. J. McKeon of the Ordnance Corps of the Army.

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G.E. Employees in Service

More than 5,000 employees of General Electric Co.'s plants throughout the country are now serving in the armed forces, W. W. Trench, secretary of the company, has announced. He added that employees of the Schenectady works alone since April 1 have been entering the service at the rate of 75 a week.

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Acquires New Plant

Announcement has been made by the Ergolyte Manufacturing Co., Philadelphia, Pa., maker of electric arc welders, of the opening of a new plant on Lawrence Street, Philadelphia. The new factory is more than twice the size of the company's previous Philadelphia plant. John H. Read, president, indicated that a large quantity of new and specialized manufacturing and testing

DISCUSS SUBSTITUTE MATERIALS—At a special war-time conference held at G.E. Institute, Nela Park, Cleveland, last week, lighting fixture representatives conferred with nine leading manufacturers of materials which up to the present have never seriously been considered for their application in lighting fixture manufacture. A wide range of substitute materials, such as laminated paper, hard board, pressed wood, plastics and asbestos cement, were exhibited

equipment developed especially to speed production of the company's welding machines has been installed.

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Manufacturers Make Sales Appointments

Square D Co. has appointed Ray C. Anson San Francisco manager, following the retirement of A. S. Fraser, manager for many years. Mr. Anson has been with Square D and its predecessors for fifteen years.

Standard Transformer Co., Warren, Ohio, has appointed Richard F. Reske of Cleveland as northern Ohio representative. Mr. Reske is a graduate of the Case School of Applied Science.

Anaconda Wire & Cable Co. has opened a new district sales office at 312 Trade Street, Charlotte, North Carolina. D. T. Werner is district manage.

Phelps Dodge Copper Products Corp. has appointed Robert C. Wilkin as Pacific Coast manager with headquarters in Los Angeles. Prior to his West Coast appointment Mr. Wilkin was sales manager of building wires for the Habirshaw Cable and Wire Division of Phelps Dodge Copper Products Corp. in New York City.

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Century Bonus Awarded to Prompt Workers

A monthly bonus of 10 percent, ranging from $15 to $40, will be awarded to all employees in the production departments of the Century Electric Co., St. Louis, who report for work on time each working day. Provision for the bonus was included in a new contract clause signed by the company and the CIO United Electrical, Radio and Machine Workers of America. About 1,700 workers will be affected by this bonus to be given as an incentive to increase production.

Another new clause "freezes" all base rates, piece-work rates and time allowances during the war. The contract also made provisions for a blanket wage increase of 6 cents an hour.

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Dividends Reduced

Clark Controller Co. has voted a 25-cent dividend to its stockholders, or half the amount paid in March.

Colt's Patent Fire Arms Manufacturing Co. has declared a dividend of $1 a share on the capital stock, representing a reduction of fifty cents from the disbursement on March 31.

Johns-Manville Corp. has declared a common dividend of 50 cents a share, payable June 24, to stock of record June 10. The common previously paid 75 cents quarterly.

Field Reports on Business

Plant expansion on an enormous scale and the extensive construction of housing facilities for war workers throughout the country are producing an incessant demand for electrical equipment and supplies. Employment and payrolls show marked increases. Retail trade is falling off.

NEW ENGLAND

An incessant demand for electrical equipment prevails throughout this district. This is sustained in part by an unprecedented activity among shipyards here, by factory expansion on an enormous scale, by increases in facilities for housing and maintenance of naval stations and army depots and by participation of widely diversified industries in war contracts. Massachusetts woolen mills, metal working industries and paper mills are operating at the highest levels yet recorded.

United Illuminating Co., New Haven, Conn., has purchased a 2,000-kva., 15-kv. mobile substation unit. Commonwealth Electric & Manufacturing Co. has sold a 200-kw. boiler equipped with ten 22-kw. immersion type heating units, full automatic control. Inquiries for heat-treating furnaces are increasing. Small motor orders in large groups running up to 500 motors are reported by one manufacturer. Bookings of motors by machine tool builders are specifying ratings which indicate a resumption of foreign shipments.

Among recent contracts received by Gamewell Co. were fire alarm system supplies and station equipment in encouraging amounts. Marshall & Co., Boston, has been awarded a contract for installing electrical traffic control units at a cost of $16,500. Contracts for wiring and furnishing supplies for the extension of the Boston air-raid warning system have been awarded at a cost of $6,522.

Due to a rapid increase in business B. F. Sturtevant Co., Hyde Park, Mass., has subcontracted among 60 industrial plants for their air-conditioning and ventilating equipment. Two plants employing 700 workers were recently added to their list of sub-contractors. Hygrade Sylvania Corp. has added 40,000 sq.ft. of floor space. New construction and alterations in buildings for April in the Boston area were estimated at about $4,000,000.

CHICAGO

Armament production moved a step nearer to capacity as more plants were converted to the manufacture of war materials last week. The new House bill creating a small business corporation to make loans enabling small concerns to secure war contracts will bring still greater numbers into actual participation in the war program. With the several huge plants now under construction scheduled for completion late this year, production of war equipment in this area will reach a tremendous volume.

The nation's largest synthetic rubber plant will be constructed at once in the Great Lakes area. The project will consist of three units and cost in excess of 100 million dollars. The Foote Brothers Gear Company is installing 243 circuits, 1336 lights and 55 motors totaling 322 h.p. The city electrical department has requested bids on 17 substation switchboard panels.

Severe wartime restrictions on normal business in this area were reflected in April statistics. Compared with last year 13 lines of trade show sharp declines. Building permits dropped 50 percent and the amount for contracts awarded was sharply curtailed. Industrial employment and payrolls showed marked increases, however and telephones in use increased 36,243. Retail trade is falling off and merchants have strengthened promotions to stir up buying volume.

NEW YORK

Despite increased purchasing power, retail trade is lagging behind last year in terms of actual goods sold. With prices up about 20 percent over a year ago, dollar volume is ahead, however, for the month of May; dollar volume gains will average about 5 percent gain for the month. During the week ended May 23 department store sales fell below last year's corresponding week for the first time in 1942, according to the Federal Reserve Board index. Narrowing gains in dollar volume retail sales point to a definite reaction from the heavy forward buying earlier in the year. Shortages of durable consumer goods in the months to come will probably mean further declines.

Engineered construction for the past week totaled $163,227,000, an increase of 132 percent over the corresponding 1941 week, but 25 percent lower than the week previous, according to *Engineering News-Record*. With this week's construction total, volume for May reaches $1,044,572,000—the highest monthly total ever reported—over 90 percent represented by federal work.

PACIFIC COAST

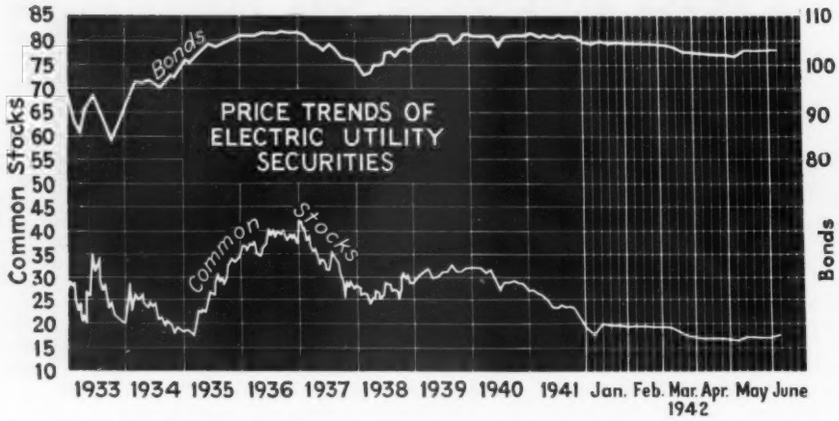
Price and, even more, delivery and priority competition have been especially keen during May. Large assorted shipments of standard or sub-standard material have been quite promptly handled by wholesalers.

Important industrial business covers a $6,000,000 addition to Columbia Steel, including a 6-ton electric furnace, a 19,000,000 copper ore reduction plant in Arizona, a $1,000,000 RFC-financed aluminum plant in central California, requiring 100,000 kw. from San Francisco's Hetch Hetchy plant, and a $4,000,000 addition to a ship turbine plant. Airport electrical construction includes a million-dollar addition to a Northwest airport; another group of central and southeastern California fields, averaging 75 boundary lights and 20,000 ft. main cable; a $500,000 addition to a Utah airport, and a $600,000 training school in Arizona.

Recent orders cover $60,000 600-kv. outdoor substations for a Pacific naval base, $120,000 switchgears and cable for the Hawaiian Islands, three 1,500-kv. transformers and $35,000 welding sets for San Francisco shipyards and $15,000 switchgear equipment for a steel company.

Los Angeles has canceled its June 1 calls for bids on four plants proposed for its Owens River Gorge development. Tacoma has contracted for a 6,500 x 17-ft. tunnel costing $1,604,218 and a power house extension of $298,071.

Utility Stocks and Bonds Continue Gains


PRICE TRENDS OF ELECTRIC UTILITY SECURITIES
Bonds
Common Stocks
Common Stocks
Bonds
85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10
110 100 90 80
1933 1934 1935 1936 1937 1938 1939 1940 1941 Jan. Feb. Mar. Apr. May June 1942

The recent gains in prices of utility securities were accelerated during the past week. "Electrical World" stock index went to 18.0 from 17.5 the previous week; last year, 23.1. Bonds advanced to 102.5 from 102.3; last year, 105.7

SEC Reopens North West Hearings

SEC has announced a revival of the proceedings, under section 11(b)(2) of the Holding Company Act, to determine whether the continued existence of the North West Utilities Co. "unduly or unnecessarily complicates the structure of Middle West Corp., the parent holding company system. Hearings are set for June 16, 1942.

SEC also directed that the hearings should determine whether the continued existence of North West Utilities inequitably distributes voting power among security holders of Middle West Corp. and Wisconsin Power & Light Co.

FINANCIAL BRIEFS

CONTINUING ITS PROGRAM of debt reduction, the North American Co. has announced that it will redeem, on June 27, the remainder of its outstanding 4 percent debentures, series of 1959, in the amount of $1,813,000. As a result of the retirement, North American will have redeemed $25,337,000 of debenture indebtedness since April 15 of last year, reducing the amount outstanding to $44,663,000 from $70,000,000.

HOLDERS OF FIRST PREFERRED STOCK of American Superpower Corp. are being urged to exchange these shares for the $3 cumulative preference stock of the United Corp. on a three-for-one basis. The company said it owned 130,000 shares of United Corp. preferred and was prepared to exchange them for 43,333 shares of its own preferred stock. Tenders must be received before June 6.

EMPHASIZING UNCERTAINTIES in the present situation, Commonwealth & Southern Corp., at a recent directors' meeting, took no action on payment of dividends on its preferred stock. The company had been paying 75 cents—half the regular rate—for several years. Reasons cited were pending tax proposals, need of subsidiaries for cash for war construction and possible results of SEC's order directing that the company be recapitalized into one class of common stock.

NEW ISSUES OF SECURITIES offered for cash in March declined to $709,000,000, the lowest amount offered since November, 1941, according to the SEC. Of the total, public utility issues led the list with a total of $49,000,000 of March flotations. One issue alone, however, accounted for much of the total—$32,500,000 Pennsylvania Electric Co. first mortgage 3⅜ percents, due 1972.

AT THE REQUEST of North American Light & Power Co., SEC will reconvene hearings on June 10 on the company's proposal to acquire and retire certain of its sinking fund debentures. As a step in the company's plan for ultimate liquidation under the Holding Company Act, it proposes to acquire and retire $3,376,500 principal amount of its 30-year debentures, series A, 5½ percent, due July 1, 1956, outstanding in the amount of $9,000,000, of which North American Co. own $6,623,500.

MONTANA-DAKOTA UTILITIES CO., has been authorized by the FPC to issue an aggregate of $1,000,000 of first mortgage bonds. Part of the proceeds will become available at once to reimburse the company's treasury for expenditures for property additions and the balance will be withdrawn against bondable net additions after March 31, 1942.

PRIORITIES AND PRICE SHORTS

IN A MOVE to conserve nickel, chromium and their alloys, WPB has assumed control over production and distribution of various types of industrial instrument parts, such as valves, nozzles, protective tubings, thermocouples, etc. Permitted operating conditions are established for future use of such equipment and specifications limiting use of nickel and chrome established. The order is L-134.

ELEVATORS, ELECTRIC MOTORS of more than 1 hp., industrial fans, industrial compressors and pumps, and several other similar classes of machinery may now be obtained only with an A-9 or higher rating under terms of order L-123. Manufacturers may ship to distributors only to fill approved orders held by the latter. Repair parts valued at less than $1000 are not covered.

ORDER L-117, limiting production and distribution of heavy power and steam equipment, has been amended to clarify the definition of equipment covered so as to specifically exclude equipment for marine use.

REDEFINITION OF "portable lamps," covered by order L-33, specifies that it does not cover "any flashlight or other battery-operated lighting device, mechanic's lamp, industrial lamp designed specifically for use in conjunction with any industrial machine, tool, or assembly bench or other similar factory equipment, or any overhead suspended fixture (whether portable or not)." Use of iron and steel also is prohibited in portable lamps, except for sockets, separate switches, and similar functional parts. Cords are reduced to 8½ feet for floor lamps, 7 ft. for other types.

Utility Reports

	Net Income 1942	1941
*Birmingham Electric	$935,710	$570,300
*Carolina Power & Light	2,837,463	3,921,715
†Commonwealth & Southern and subs.	11,631,397	11,779,259
†Dallas Power & Light	1,687,407	2,166,594
*Gulf States Utilities	1,869,850	2,238,092
*Houston Lighting & Power	2,714,367	2,965,096
*Idaho Power	1,171,543	1,532,360
†Kansas Gas & Electric	1,271,064	1,606,481
†Louisiana Power & Light	1,053,744	1,047,332
†Minnesota Power & Light	1,554,207	1,441,254
*Mississippi Power & Light	534,042	288,827
†Montana Power and subs.	3,361,965	3,795,085
*Pacific Power & Light and sub	682,200	904,622
*Puget Sound Power & Light and subs.	2,862,396	1,962,721
*Texas Power & Light	1,514,444	2,022,878
*Utah Power & Light and subs.	1,916,322	2,005,947
*Virginia Electric & Power	3,777,500	4,006,880

*Twelve months ended March 31.
†Twelve months ended April 30.

FWA Takes Over High Point Plant

In a move to get around legal obstacles which have blocked construction work for three years, the Federal Works Agency has taken over the proposed $8,000.000 High Point, N. C., municipal hydro power project with the idea of building it as a federal war job. The action was taken at the direction of the President under his general war powers, on the recommendation of the Federal Power Commission.

The action was taken without advance determination of whether the War Production Board will grant priorities for immediate construction, however. An application for a project rating is before the power branch now, it is understood.

Justifies Seizure

High Point intended to build the hydro station itself with a PWA loan and grant, but was stopped by the North Carolina Supreme Court, which ruled it had no authority to carry out the work. The government is not affected by that limitation.

FWA, in a press release, justified its seizure of the project—in which it said the city concurred—as a means of providing electric energy for war industries in the neighborhood, "thereby releasing to other areas where the need is great the electrical energy now being used in the city." The agency also stated that FPC based its recommendation that the project is needed for war work on the statement that High Point was within the "blackout area" of the Southeast power curtailment program of last November. In that curtailment program, surplus energy from North Carolina was transmitted into the shortage area of Georgia and Tennessee.

Seizure of the High Point project marks the second time the government has utilized the general war-time executive powers to grab a power project. FWA took over Pensacola Dam from the Oklahoma State Authority last November for default on loan interest so that the energy could be turned over to the Rural Electrification Administration, which was bidding for a portion of the government aluminum plant power contract in Arkansas in competition with a utility pool.

FWA Administrator Philip B. Fleming stated that Kenneth Markwell, PWA project engineer for the Santee-Cooper project in South Carolina, will be project engineer for High Point, with W. Meade Keller project attorney. Markwell plans to open an office in Winston-Salem.

SEC Splits on Virginia Financing

For the first time, last week, the SEC membership split by a three-to-two vote, in an opinion permitting the Virginia Public Service Co. to proceed with the sale of $36,500,000 first mortgage bonds and sinking fund debentures, before awaiting the outcome of a recapitalization proceeding under the Holding Company Act.

The majority group, composed of Edmund Burke, Jr., Sumner T. Pike and Robert E. Healey, approved the request of various interests that the refunding program proceed and stated that "in view of uncertain conditions arising out of the war, we do not desire in any way to delay the proposed refinancing." The rest of the proceedings, which involve corporate simplification under a commission order and, in addition, a voluntary plan for recapitalization, filed by the company, may be reserved for future determination, the majority opinion ruled.

Chairman Ganson Purcell of the commission and Robert H. O'Brien, member, dissented from the majority position in a sharply worded opinion. The proposed new financing, they said, should not be severed from the recapitalization, but should be considered as part of an over-all plan.

The $36,500,000 loan, consisting of $26,000,000 of bonds and $10,500,000 of debentures, was floated this week. Virtually the entire proceeds of the financing will be applied to the retirement of the present funded debt of Virginia Public Service and of its subsidiary, the Virginia Public Service Generating Co.

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Utility Stockholders Institute Suit

General Gas & Electric Corp. minority stockholders filed suit in Supreme Court recently to compel NY PA NJ Utilities Co., a subsidiary of Associated Gas & Electric, to transfer to General Gas & Electric controlling blocks of stock in four operating utilities.

Plaintiffs asserted that the stock had been taken from General Gas & Electric (another Associated subsidiary) by Associated in 1929 and later transferred to NY PA NJ Utilities. The four operating company stocks were those of New Jersey Light & Power, Northern Pennsylvania Power, Metropolitan Edison and N. Y. State Electric & Gas.

Suit was instituted by the JCF Holding Corp. and the defendants filed motion to dismiss on the grounds of insufficient legal capacity to sue.

Sales Opportunities

CALIFORNIA—Shell Chemical Co., 100 Bush Street, San Francisco, plans early erection of new plant for the production of butadiene at an estimated cost of close to $15,000,000. Financing by Defense Plant Corporation.

COLORADO—Department of Public Utilities, Colorado Springs, plans new transmission line for power supply for proposed new construction in the area.

CONNECTICUT—United Illuminating Co., New Haven, is completing plans for superstructure for new addition to steam-electric generating station and will begin construction in July. Work is estimated to cost over $1,000,000. Westcott & Mapes, Inc., 139 Orange Street, New Haven, is consulting engineer.

INDIANA—Rubber Synthetic, Inc., care of Standard Oil Co. of Indiana, 910 S. Michigan Avenue, Chicago, Ill., plans construction of new synthetic rubber mill estimated to cost about $50,000,000, with financing to be provided by Defense Plant Corporation.

MASSACHUSETTS—Boston Edison Co., Boston, has approved plans for new power substation in Charlestown. Jackson & Moreland, Park Square Building, Boston, are architects. Also will make extensions in transmission and distributing lines in same district.

NEBRASKA—Consumers Public Power District, Columbus, plans early construction of four miles of 33,000-volt transmission line. Plans also are under way for extensions of primary and secondary lines in parts of several counties.

NEBRASKA—Lincoln City Council plans new booster pumping station for waterworks system and will purchase necessary equipment in open market, including pumping units, motors, electric controls and auxiliary electrical apparatus. Cost estimated about $45,000. D. L. Erickson is city engineer.

NEW MEXICO—Union Potash & Chemical Co., 20 North Wacker Drive, Chicago, Ill., plans extensions in power plant at potash mining properties and expansion in refining plant and mining properties, under an appropriation of $525,000, approximately one-half to be expended for power plant program.

NORTH CAROLINA—War Department has authorized a new $3,000,000 air force training school, work to be carried out under direction of United States Engineers Office, Charleston, S. C.

OHIO — Ridgewood Steel Forge Co., Seventy-first Street, Carthage, has taken out a permit for new 66-kv. power substation for distribution service at mill, and will proceed with construction at once.

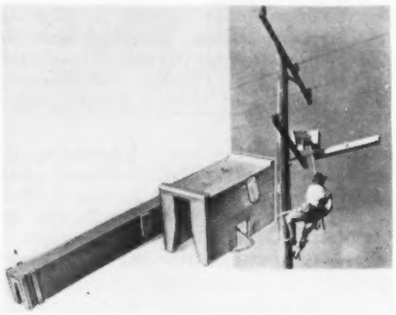
OHIO—Midwest Electric, Inc., St. Marys, has plans maturing for extensions in primary and secondary lines in parts of Auglaize County, totaling over 350 miles, with service and operating facilities. Financing in amount of about $330,000 is being arranged for work.

VIRGINIA—Virginia Electric & Power Co. has plans maturing for new steam-electric generating station in Chesterfield County, with an initial rating of 50,000 kw. Completion scheduled in about 18 months. Cost is estimated about $6,800,000. Stone & Webster Engineering Corp., 49 Federal Street, Boston, Mass., is engineer for project and will supervise construction.

NEW EQUIPMENT

Wooden Hoods

Wooden insulator and conductor hoods that fit together are now available in sets for double or single insulators. Insulator



Wooden insulator and conductor hoods for "low-voltage" lines. **A. B. Chance Co.**, Utilities Div., Centralia, Mo.

hood fits over end of conductor hood by tongue-and-groove arrangement. All hoods are treated with pole preservative. A new fork-like tool which fastens to the end of a pole and slips astride block provided on side of each hood may be used to mount hoods in place.

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Resistor

Sectional resistor; 0.25 to one megohm, rated current one milliamp., 1⅜ in. by 1¼ in. in diameter per section. **Westinghouse Elec. & Mfg. Co.**, Meter Div., Newark, N. J.

Power rectifiers are one suggested application of new sectional resistors for use on a.c. or d.c. circuits from 250 to 30,000 volts. Individual, hermetically sealed units are wire wound around a ceramic resistor spool, sectionalized; adjacent sections are wound in opposite directions to give a non-inductive resistance. When a number of sections are mounted on one shaft, permanent taps may be taken off between any two sections.

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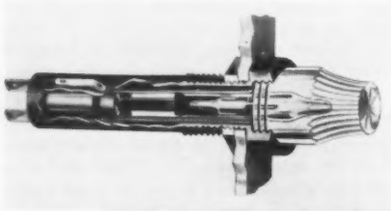
Indicator Light

Designed for control panel mounting, this indicator light may be installed at any



"Littelfuse Panel Mounting, No. 1414" indicator light; for panels up to 5/16 in. thick; ½-in. mounting hole. **Littelfuse, Inc.**, Chicago, Ill.

convenient point in association with motor control equipment — circuit breaker, for example—and lights only when the circuit is broken. For 24- or 48-volt filament bulb, no resistor is needed; otherwise it uses a built-in 200,000-ohm protective resistor, in series with a neon lamp.

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Time Totalizer

"Industrial Time Totalizer"; styles for 115 and 230 volts, 25 to 60 cycles. **Industrial Timer Corp.**, Newark, N. J.

Welding machines are among the a.c. operated devices suggested as applications for this time-totalizing device. Hours and minutes are shown on totalizer dial, with capacity to 10,000 hours, indication of one-tenth hours. Suggested uses: production costs of machine can be computed from use-record; equipment of pre-determined life expectancy can be replaced before expected failure.

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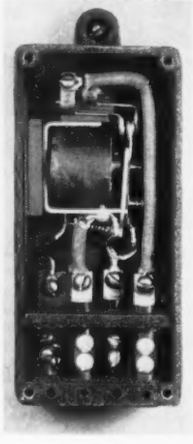
Street-Lighting Control

New device may be adapted to pilot-wire or radio control of street lighting. Manufacturers state power drain does not exceed 2 watts; switch contacts are suitable to control circuits having current inrush of 15 times normal rating. Suitable for pole or manhole installation.



Street-lighting control; water-proof cover removed. **The Palmer Elec. & Mfg. Co.**, Wakefield, Mass.

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Air-Cooled Transformers

Air-cooled transformers; 2,400-volt primary; sizes from 1.5 kva. in single-phase design; 3 to 50 kva. in 3-phase design. **Acme Electric & Mfg. Co.**, Cuba, N. Y.

Air-cooled 2,400-volt primary transformers are announced by this company for general industrial applications. They are designed with 5 percent taps to allow for voltage correction to compensate for voltage drop.

BUYING ELECTRICAL EQUIPMENT?—McGraw-Hill's *Electrical Buyers Reference* is a convenient place to look first for manufacturers' product data, names and addresses.

Switchboards

As an addition to its motor control center line, this company has announced control center switchboards—an assorted assembly of switch or circuit breaker units, 30 to

Representative installation of "Control Center Switchboards". **The Trumbull Electric Mfg. Co.**, Plainville, Conn.

200 amp. capacity, in vertical section troughs, fed through the busbar. Connection with load may be made by inserting switch or circuit breaker units under busbars in power trough.

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Photoelectric Relay

Photoelectric relay; indoor or outdoor types. **General Electric Co.**, Schenectady, N. Y.

Designed especially for turning off show window lights, illuminated signs or protective lights during blackouts, this photoelectric relay is highly directional, to make it subject only to the control of the street light at which it is aimed. Short time delay prevents false operation by momentary flickering of street lights. Operation of device will not affect normal functioning of time switch, if used in conjunction with it. If either of two tubes fails or sensitive relay coil is open-circuited, relay is deenergized and lights are turned off.

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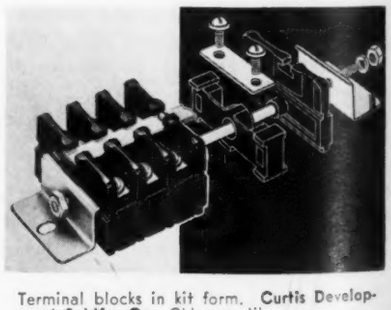
Terminal Blocks

Terminal blocks are offered in kit form for those users whose terminal block requirements are varied. Two kits are available: One contains 50 center barriers and terminals, the other five sets of end barriers, mounting bracket, through rod and other hardware. Moulded parts have a tensile strength of 4,000 lb. per sq.in.; voltage breakdown at 60 cycles—50 percent relative humidity—is approximately 375 volts per mil.



Terminal blocks in kit form. **Curtis Development & Mfg. Co.**, Chicago, Ill.